MAG

THE AUSTRALIAN ATARI GAZETTE

$4.00

May 1991

12th May 10:30am start.

This month we look at:
Music and Midi

MACE BBS: (03) 764-1185 24 HOURS 7 DAYS A WEEK

Monthly Journal of the MELBOURNE ATARI COMPUTER ENTHUSIASTS INC.
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MACE Meetings

Dates	Themes
12th May	Midi Packages
9th June	Printers & Programs
14th July	AGM- Elections / Games
11th August	
8th September	
13th October	Rummage Sale
10th November	
8th December	Annual BBQ

This month'sTopics:

Music & Midi

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4. Editorial
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16. The TT Desktop: Hands-on
23. Atari MEGA ST^{E} Specs
24. Atari TT030 Specs
25. Spirograph Revisited with Logo
28. GFAGEN7
32. Z-Net (U.S.A.)

MACE 1982- 1991

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Copy Deadline

for JUNE 1991 issue:

12th MAY 1991

Meetings start at **10:30am** in rooms R2/3 in Rotunda building,
Monash University, Clayton.
Please bring a plate of goodies for coffee

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(056) 281-407

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(ring between 7pm and 9pm only, please as they need their sleep and they have volunteered for these positions).

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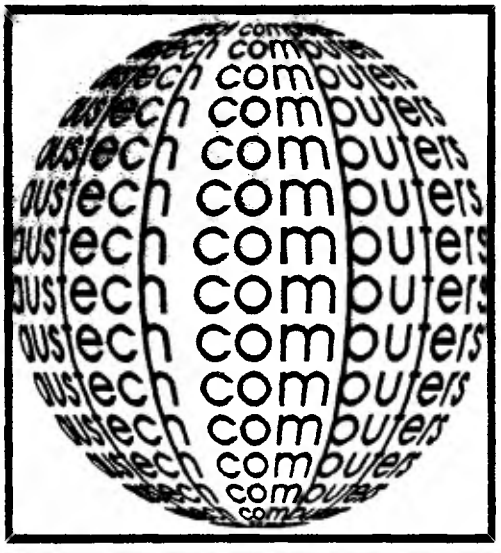

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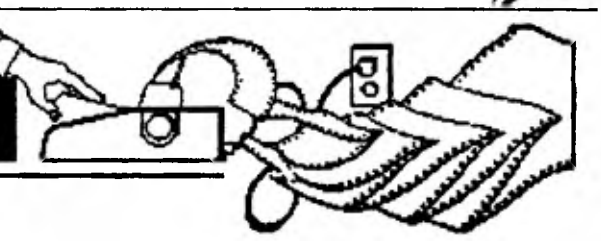
Editor's Message



AGM Nonimations Received

The Following people have been nominated for positions on the MACE Committee. Nonimations are still open and these once again will be called for at the next May Meeting.

MACE Reps	Owen Brown Brian Campbell
Treasurer	Davio Salpietro KimBeaumont
Secretary	**(Unfilled at present)**
Vice President	Owen Brown
President	Brian Campbell
Returning officers:	Bill Cooney, Graeme Lamb, Greg Campbell

A reminder that if you are wanting the club to run for your benefit then you will need to make your voice heard.

Annual general Meeting
14th july 1991
CALL FOR NOMINATIONS

The following positions will become vacant at the next Annual General Meeting on the 14th July 1991.

President
Vice President
Secretary
Treasurer
MACE Member Reps (2)

If you would like to stand for one of these positions please fill in a nomination form. A call for these positions will also be taken at the next April meeting.

If you have any enquiries, please contact the President on (056) 281-205

TREASURER'S REPORT

As the club is bound by the Incorporation Act to submit a financial report at the end of our financial year, time is again drawing upon us where we will need to call for two financial club members to audit the account books. If you feel you would like to do the job please see myself or someone else on the committee at the next club meeting.

Don't forget the club is selling 3-1/2" blank disks for $12.00. Proceeds go into club coffers as fund raising and thereby help everyone involved in club activities.

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SUNDRIES (HARD DISK BULK BUY, JOYSTICKS)	$2814 .30
TOTAL	$4762 .66

APRIL RECEIPTS

M/SHIP FEES	$ 625 .00
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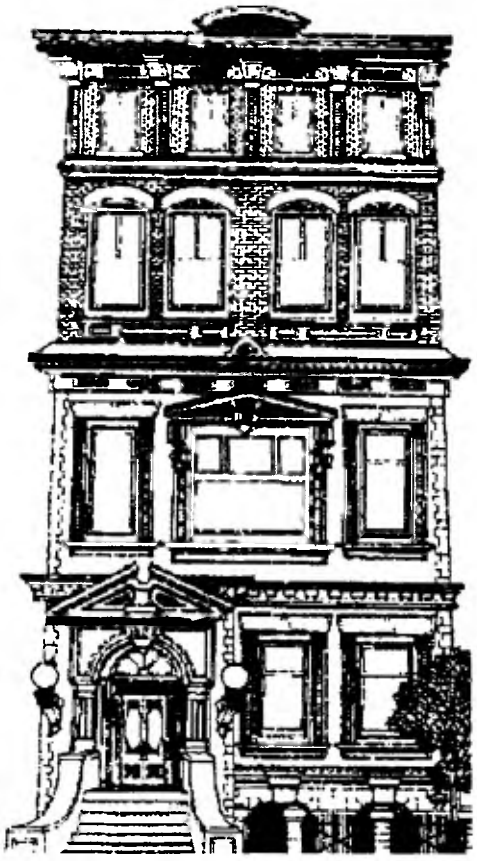
BULK BUYS (HARD DISKS, JOYSTICKS)	$2469 .00
BBS REGISTRATIONS	$ 15 .00
TOTAL	$3573 .00

Current balance at the end of April is $4078.63
Financial members is 238



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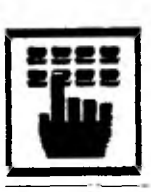

Desk Select Options Help More Help

MIDI MUSIC MAKER

Before MIDI standard arrived, there are tons and tons of different music format. I guess every music package has its own file format. Music Studio has its own, Music Construction Set has its own, Advance Music System has its own and the list goes on. Now there is a program which can read the music files from most of the popular music programs, this program is *MIDI Music Maker*. Obviously, MIDI Music Maker will also read MIDI Standard File format 0 and 1. It will not read MIDI Standard File format 2.

With MIDI Music Maker, it does not matter if you have any MIDI equiment or not as you can play the music through the internal speaker. The music quality will not be too good. For the best result, some form of MIDI equipment would be needed, be it a synthesizer or a sound module.

What can this MIDI Music Maker do, I hear you ask? Below is a list of some of its capabilities.

-It can convert music files from most music programs to MIDI Standard File format 0.
-Ability to re assign channels, thus matching the original channels of the music file to your own MIDI set up.
-Has special features for the Roland MT32 and Yamaha FB01 sound modules.
-Has on-line help
-Runs in monochrome and colour.

The bottom line is if you want a program to just listen to the MIDI files or other music file from other music programs without loading your favourite sequencer, MIDI Music Maker should do nicely.

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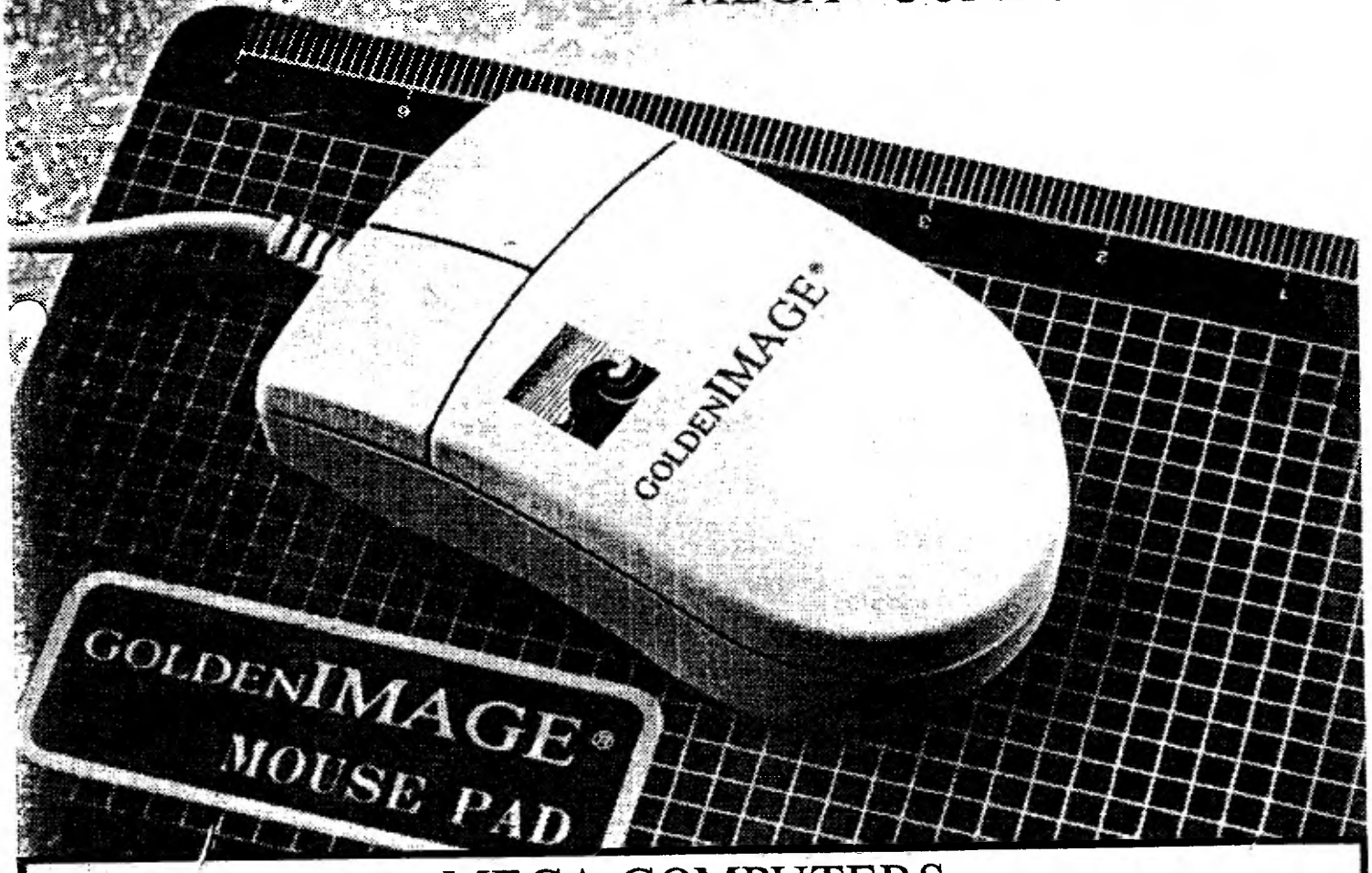

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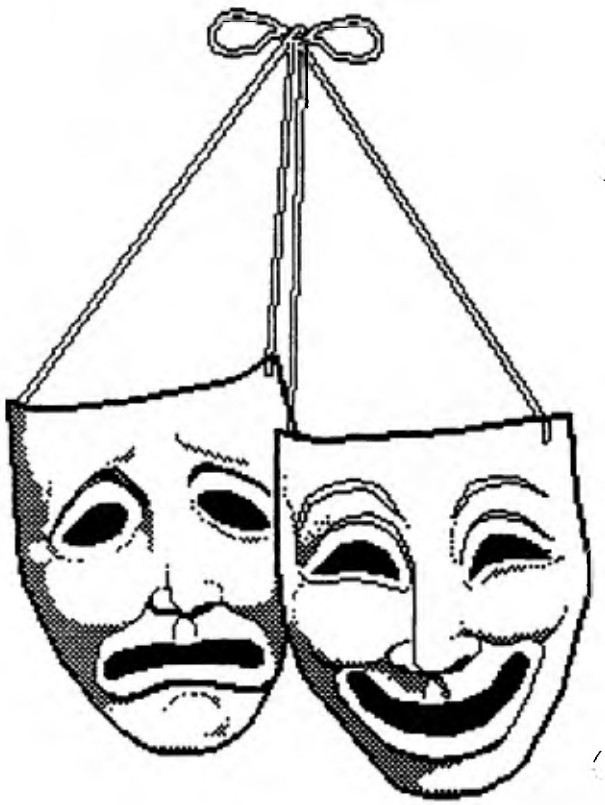
PROBE
NEWS ON ATARI ST
By Alf

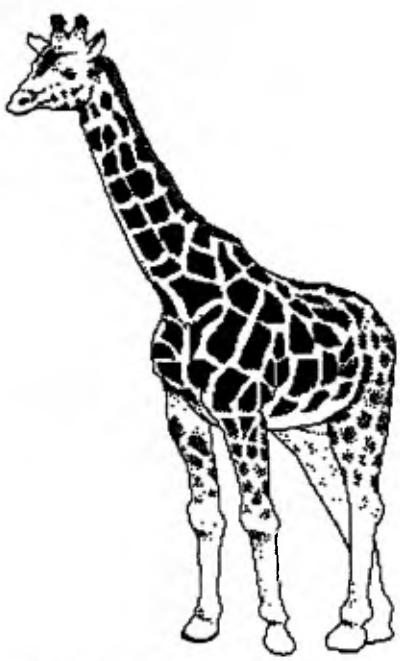
Beginners Corner #6

Utilities & Accessories

There is an abundance of public domain and shareware utilities and accessories in the Mace Library and on the Mace BBS. For newcomers to the Atari ST, this profusion of software aids can be most bewildering when it comes to selecting one, since there are literally hundreds. There may be dozens of the same sort, performing identical functions, some completely useless or worthless because they do not work properly. Some are absolutely indispensable such as the Ram Disk utilities while others are gimmicky. There are games, usually of the 'Breakout' variety, screen savers and screen snapshot utilities, disk labelling and directory printing, copying and formatting disks every which way. Calculators by the wheel barrow and utilities and accessories for setting and displaying the date and time.

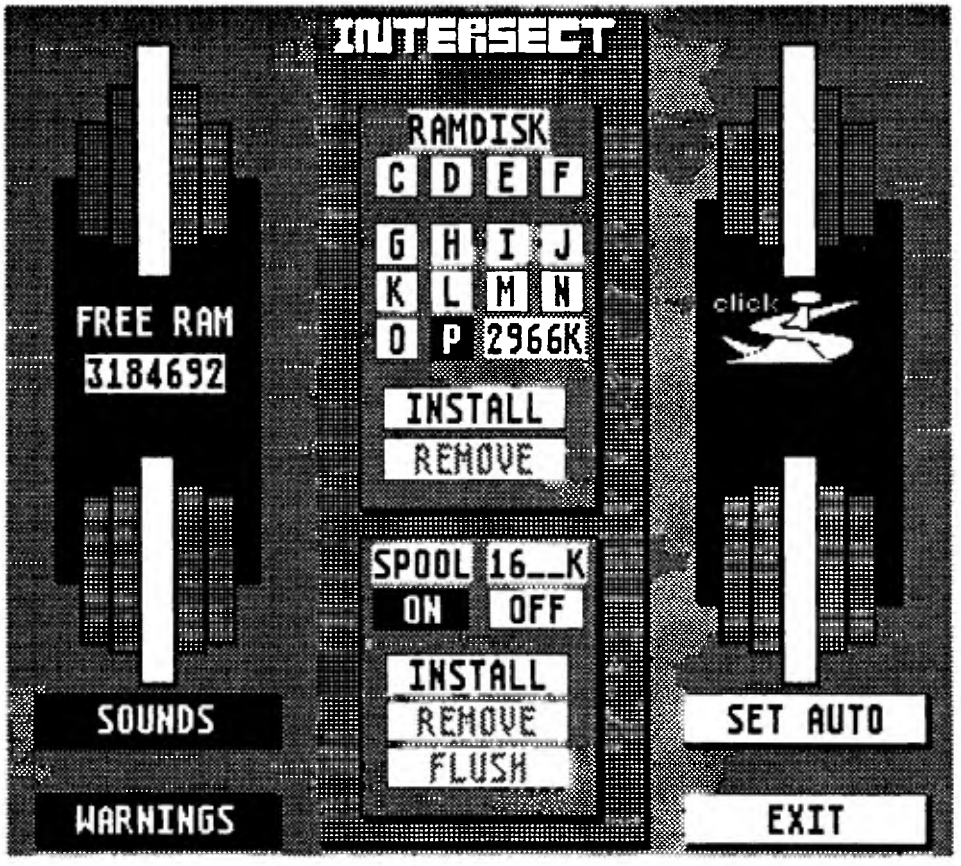
With such a multitude of choices, how do you know which one you need in the first place and then find the utility that works and suits you?
Well, just read on.





Ram Disk

Probably one of the most useful utilities, to me anyhow, is a Ram Disk which comes as an accessory or as an executable program. Since I have written on this subject in one of my earlier articles only a few months ago, I won't explain here how to set up the Ram Disk. However, if your system, like mine, consists of only one disk drive, a Ram Disk is a must. One of the better ones is RAMBABY which loads as an accessory. Or you may want one that loads automatically from an AUTO folder on power-up. The latter version is the more convenient as it is all done without interference and the DeskTop comes up with the Ram Disk already installed.



Ram Disk accessories are more versatile, as you can nominate the disk size (memory usage) from one use to the next and install it whenever you need. Note that most Ram Disk utilities will not allow you to release the memory space they use, when finished.

Besides being useful (and very, very fast) for copying, you can temporarily store on a Ram Disk a file from within an application and then pass this file on to another application when you exit one and load another.

Remember however to always save the files on a floppy disk before you power off the computer.

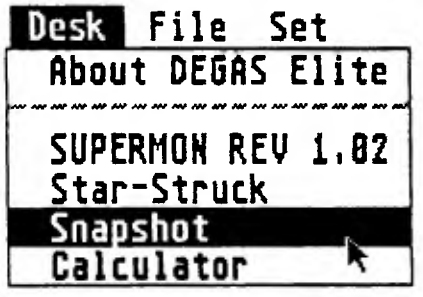
Screen Saver

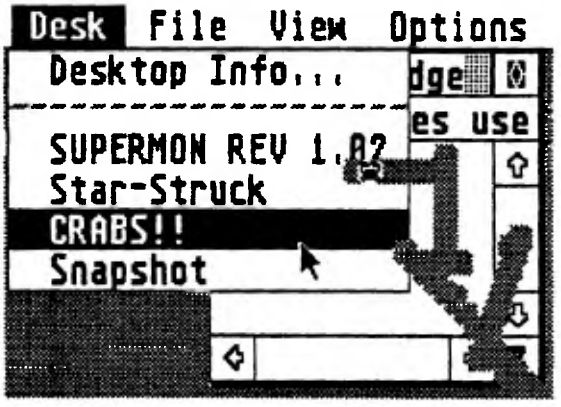
If you leave your computer system turned on for prolonged periods of time, like going away to make yourself a cuppa or watching a show for an hour or so, you may want to protect the monitor screen from burn-out. I used to switch the monitor off and leave the computer on, but this practice may cause you to inadvertently switch the system completely off when you finally get back from whatever distracted you.

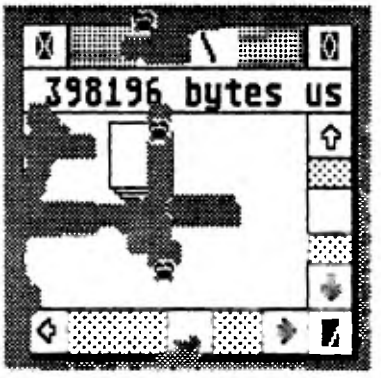
Instead of switching off the the monitor, I now run a screen saver accessory, STARSTRUCK by Tony Sanson, that activates itself whenever the system is unattended or not touched for a few minutes. It then darkens the screen and radiates hundreds of stars randomly from the center of the screen, outwards. But as soon as you touch the keyboard or the mouse, the original screen comes back.

Screen Saver & Snapshot

A different kind of a screen saver is a utility for taking a graphics snapshot of the current screen and saving it as a picture file on disk. There are literally oodles of different ones about and they come in two versions. One type loads as an accessory and is always available when needed, from



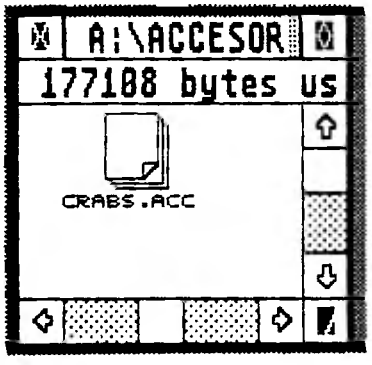




the Menu Bar, if you have an application installed and running which uses GEM.

The other kind is loaded into memory prior to installing your application and stays resident in memory waiting for a certain combination of keys to be hit on the keyboard. This sort of utility is handy for non-GEM applications and programs that do not use the Menu Bar. One such snapshot program was published some time ago in the Mace magazine under the name of GRABBER.PRG and is freely available from the library.

Most of the utilities save the picture file in a format easily readable by other software such as Degas format (PI1 to PI3), Neochrome format (NEO) or .IMG format. The GRABBER program saves the entire screen regardless. However with a snapshot utility like the SNAPSHOT accessory which comes with the word processing application 1st Word, you can cut out any part of the screen and save it as a picture file.



Relaxation

If you feel bored during long sessions at the computer, relax with one of the many (what I would call gimmicky) games. There is one called MELTDOWN which makes your screen melt away in front of your eyes. Don't let this one go too far or you may have to reboot the system. Another, I have seen a few years ago was really scary, I can't remember what it was called, it disintegrated your system. If you feel really bored and lack creativity, you can watch your screen being eaten away by the CRABS accessory.

These are all non-participating games, however there are others like maze games and puzzles. But enough of this, this month, more utilities and accessories next time.

See you later.

MACE: Trading Post- Forsale- Wanted-

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HELP WANTED

STOS COMPILING

If anyone can help out with the STOS language and its compiling program could they please contact: Ray (03) 752-2443 A.H.

Introductory BASIC
Apology
Owen Brown

In the last issue I did say that I would be looking at:
(a) putting a business name
(b) Numbering or Lettering lines
(c) Putting a cost/charge on the bottom of the Tattslotto program.

Unfortunately time and family constraints have meant it was not ready by the deadline.

It is almost ready and hopefully will appear in the June issue.

FORSALE 8 BIT

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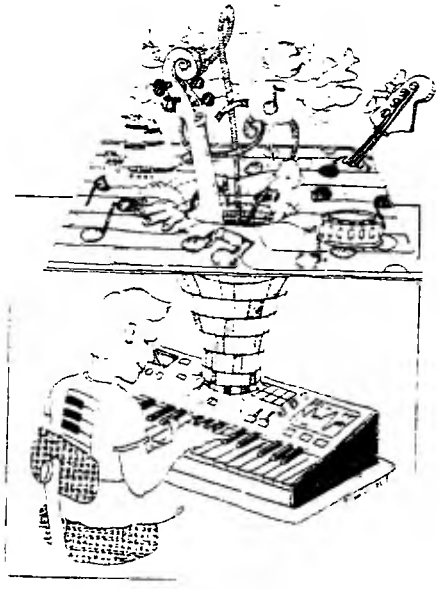
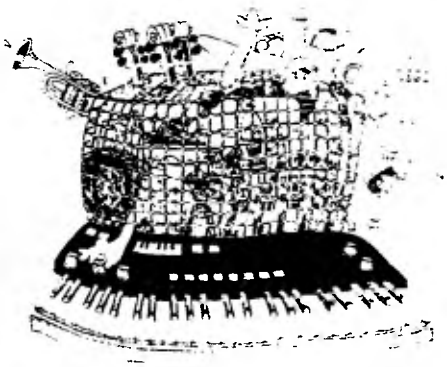


The Complete Synthesizer

By David Crombie - A Review

By Frank Brown.



The aim of this book is to familiarize the reader with the fundamentals of electronic music and, in particular the workings of the electronic music synthesizer. Although this book is written for people with little or no knowledge of synthesizers, an experienced user would find that it contains a great deal technical and background information on sound and how it is made electronically .

The topics covered are;

- Understanding sound, what is sound, the elements of sound, waveshapes and waveforms.
- The synthesizer voice module, voltage control, what is a voltage controlled oscillator, noise, filters and mixers.
- The amplifier, envelope generator and low frequency oscillator, timbre cross modulation and ring modulation.
- The keyboard, pitch bender, modulation, touch sensitive keyboards, portamento and glissando.
- Types of synthesizer, guitar, wind and percussion synthesizers.

Computer based systems, additive direct synthesis.

- Using the synthesizer, abstract (or imaginative) and imitative synthesis.
- Synthesizer accessories, an introduction to sequencers, footpedals and effects units.
- A history of the synthesizer.

This book is very comprehensive as you can see from the list of topics covered and most are covered in fair detail. However, as this book was written in 1982 the contents have dated somewhat. Progress in the field of electronic instruments has been very rapid and this book does not make any reference to Midi and has only a very small section on computer based instruments, (Note: NOT microprocessor, these had only just got of the drawing board in 1982). Most of the styles of instrument that we know today had not been invented yet.

Inspite of this the book is still worth reading and I did learn something from it. I wouldn't buy it though, see if you can borrow a copy from your library.

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D. CROMBIE
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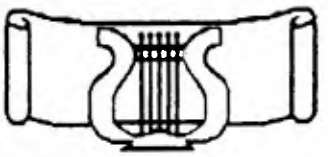

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the 8-Bit Alchemist

The Twilight Market: Mailorder Sources for 8-bit Stuff

by Ben Poehland

For Atarians of 8-bit persuasion, 1990 has been a watershed year. Our two oldest and best national magazines have gone over the edge: ANALOG is gone for good, and ANTIC leads a shadow existence in STart. Bob Brodie's comments to me at the WAACE AtariFest notwithstanding, anyone with half an ounce of brains can see Atari has cast us aside like yesterday's newspaper. It is scant comfort to say we are no worse off than Commodore or Apple owners who have likewise been relegated to the back row. Only Radio Shack, with its reputation for flailing long-dead corpses, continues to manufacture and sell 8-bit technology. It is significant that 1990 marks the first year in 8-bit history in which there has been no release of new Atari 8-bit software by a major commercial software producer.

The home computer craze is now in roughly its twelfth year, but it appears only a small fraction of those millions of 800's, XL's, and XE's have found their way to landfills. Most of them are still around the house somewhere, and a new generation is discovering them. Dad gets an ST, and the old 8-bit gets donated to the (choose one): wife, kids, mother, father, brother, sister, grandparents. These people often have more time to play with the old machine than Dad did, but are usually frustrated by the lack of sources for software and accessories. Unless you're fortunate enough to live close to an Atari 8-bit dealer (and their number is steadily decreasing), walk-in retail outlets don't exist anymore. In my own local area, this Alchemist has sadly noted at least five major distributors who quietly dropped their entire Atari computer line during the past three years. Except for videogames (ugh!).

Originsof Twilight

However the 8-bit market isn't completely dead. As 8-bit technology has slipped from the spotlight to the twilight, so has the market that serves it. Conditioned as we are to do our shopping in plastic-veneered malls that dazzle our senses with mind-numbing "ambiance," we get used to seeing the "hot" product of today's fad vanish to nothingness by next week. When a product disappears from the shelves, people just assume it isn't available any more and resign themselves to despair. These folks would buy 8-bit products if they could find them. But they have no concept of a twilight market, where the products they seek are available sight unseen. They don't know where to look. They don't know how to buy. It's hard to see in the twilight.

Eight-bit computers inhabited the retail market for such a long time that the sheer numbers of them forced the creation of a secondary market to help satisfy the demands of their owners. The secondary market consisted mainly of high-volume mail order distributors, most of whom also quit the scene when the retail market faded. However, a few mail order firms were more than just profit-gouging warehouses: some were also into product development or hardware maintenance. From the ranks of these few has risen the twilight market that now exists. Even for these firms, sales of 16-bit products contribute heavily to their balance sheets. Eight-bit products appear to be sold more from a sense of loyalty or commitment to the market place rather than a lust for wealth. It's a unique sentiment in this era of mass merchandising.

Twilight Software

A roughly parallel development has occurred in the software market. Although we are still served by a few dedicated specialty software producers (such as Orion, Alpha, and MicroMiser), the big software publishing houses have abandoned us. Distributors of shareware and public domain software have moved in to fill the gap. My gut feeling is that the demand for 8-bit software is probably greater than the specialty producers and PD distributors together can fill. It isn't a problem of quantity, but rather quality: there just aren't enough serious application programs. Even so, PD is a gold mine for someone hungry for 8-bit software. All of it is dirt cheap. Some of it is junk. But

there are enough gems to more than compensate for the rotten eggs. Yet, many people don't even know where to obtain this kind of software.

Over the past year the Alchemist has been compiling a collection of sources for 8-bit public domain software and shareware, even placing orders with some. The Alchemist now offers a brief tour of the twilight market. Let's start with software.

Foraging in the Public Domain

There are so many PD software distributors it's hard to know where to start. I'll begin "close to home," then fan out alphabetically.

Right here in the pages of *Current Notes* is a good place to begin exploring the world of 8-bit PD/shareware. *CN* periodically publishes a list of titles available from the **NOVATARI XL/XE PD Library**. Disks are $3 each plus $1 shipping per 3 disks. Write Geoff DiMego, 8612 Thames Street, Springfield, VA 22151 for a catalog list and ordering info. The NOVATARI collection is typical of many of the better Atari 8-bit user group libraries, and their disk prices are on par with what other outfits charge.

The Alchemist has developed a certain philosophy on PD software purchases. At a typical price of $3 for a disk, you can afford a significant percentage of "duds." If 50% of what I buy turns out to be disappointing or useless, the other 50% of useful programs is still a fabulous bargain. Had it not been for the existence of certain PD programs that simply aren't available elsewhere, I would probably have abandoned my XL's some time ago. Most PD distributors aren't intimately familiar with the stuff they're selling, and for $3 I think it is unfair of a buyer to demand a guarantee that the software will satisfy his particular requirements. The only absolute requirement I make of the seller is that the software should load and run. My experience so far has been that most PD distributors will readily replace defective disks if you experience a problem. On with the tour!

ANTIC Publishing. For many years a leading publisher of Atari 8-bit software, ANTIC continues to spew forth 8-bit software into the twilight market from the back pages of STart magazine. ANTIC programs typically cost $20, but they've gained some attention in the past year with their "Grab Bag" of any ten programs for $49.95. Regrettably, the list of titles has shrunk over the past couple years, but you can still choose from a collection of 50 programs, some of them truly excellent. Contact ANTIC Publishing at 544 Second Street, San Francisco CA 94107. They accept credit card orders toll-free at 1-800-234-7001.

Bacmun Software. I don't know anything about these guys. They offer a free catalog. 1671 E. Sixteenth St., Suite 607, Brooklyn NY 11229.

BRE Software. This is another outfit unfamiliar to the Alchemist, but definitely worth investigating. The only "true" PD source I've seen that features a toll free order number, 800-347-6760. Send for their free catalog at 352 W. Bedford Suite 104, Fresno CA 93711. The only PD source that accepts credit cards, they also offer the Lynx and Lynx game software. PD disks are $3 each with freebies for quantity orders.

C&T ComputerActive. Run by Rusty Cryer at P.O. Box 893, Clinton OK 73601, he accepts COD phone orders at 405-323-5890 from 10AM-2PM CST. One of the best 8-bit PD sources around. The catalog is excellent, there are free disk coupons, and quantity specials on bulk purchases that reduce per/disk prices to $1.50 (!). Once you get on C&T's customer list you receive periodic flyers announcing disk specials, new additions, and a new catalog several times a year. A major software resource, thousands of files, I would estimate 500+ disks available. If you own an Atari 8-bit and don't have C&T's catalog, you are missing the boat.

Chameleon Software. 1013 Marvern Drive East, Chambersburg PA 17201. Phone 412-824-9016 or 717-267-0904. This is another outfit the Alchemist doesn't know much about. They offer a free catalog of PD software at $2.50 per disk and apparently also deal in new and used 8-bit hardware and software. It's definitely worth a look.

KaKe Software. Operated by Kevin Laufer at 9 Smith Ct., Vincentown NJ 08088. They offer a free list of 74 disks of videogames at $4.00/disk with discounts and free disk offers for bulk purchases.

M.W.P.D.S. Run by M. Wallace at 890 N. Huntington St., Medina OH 44256. This is a good source of 8-bit PD/shareware, similar to C&T but not quite as comprehensive a selection. Their catalog is a good complement to C&T since MWPDS has a better selection in certain categories (such as telecom software) than C&T. Super-low prices: $1.75/disk with a minimum 5-disk purchase, discounts for volume purchases, and freebie specials. They have occasional offerings of offbeat accessory items such as the "BOOTEASE" cartridge. They accept no COD's or credit cards, and personal checks take time to clear. Their marketing is less aggressive than C&T, but the free catalog is worth reading.

Phantom's Atari 8-Bit P.D.S. Box 331 Levisa Rd., MouthCard KY 41548. Another obscure source, gleaned from a tiny ad buried in the pages of ANTIC. Send $3 for catalog and variety disk.

Software Infinity. 642 East Waring Ave., State College PA 16801. These folks bill themselves as the "Best and Largest Atari 8-Bit PD Specialist" with over 6500 available programs, but their catalog is something of a disappointment. Printed in writing so small a Lilliputian couldn't read it, the listings I received were also poorly organ-

ized. Prices are $4.00/disk with seasonal discount offers. It's probably a good source for PD, but these guys could use some marketing lessons.

Vulcan Software. Proprietor Paul Todd has an unusual way of distributing his free catalog: it is on disk. I loaded the freebie disk into AtariWriter-80, removed extra carriage returns, and printed out about half the catalog in double-column on an old 1025. This came to about 40 single-sided pages. I would estimate the Vulcan listing to be at least as comprehensive as C&T, maybe larger. I didn't even print out the largest category of software-games, which probably would add another 10 pages (!). The quantity of material available is just awesome. Disks are $3 for single-sided, $4 for double-sided, with free shipping on orders over $20. Another excellent source of PD/shareware, this one has a strong personal endorsement from the Alchemist. Request the Vulcan catalog in writing to P.O. Box 692, Manassas VA 22111-0692.

Walt Huber. Last, but certainly not least, is the Walt Huber 8-bit software collection available from 644 E. Clinton, Atwater, CA 95301. You might pick and choose among the above PD distributors, but the Huber catalog is a "must have." What makes this software source different is that most of the 500+ available disks consist of discontinued brand-name software. This is a valuable resource for users who find themselves in the awful predicament of trying to replace a lost or damaged program disk from a software publisher long vanished from the market. Prices vary from $2 to $9 per disk according to the individual program, with a minimum $25 purchase; freebie bonus software disks are offered for bulk orders.

This list is not intended to be all-inclusive, but it should be a real eye-opener for the doomsayers who decry the lack of 8-bit software (those guys just don't know where to look). If I have overlooked your favorite secret source of 8-bit PD, why not send me their address or a copy of their catalog? The Alchemist would dearly love to expand the list and will use this space to pass along word of new sources. In the past year there have been some new entries into the shareware market that are most impressive, at prices so low you have to be an idiot to be an 8-bit software pirate (which they all are, anyway). As the big glitzy software houses leave us behind, the Alchemist sees a growing future for shareware and the specialty producers. Within the 8-bit software community there seems to exist a spirit of persistence and commitment which flies in the face of Atari's neglectful policy toward the 8-bit customer base that supported the company in its lean years.

Twilight Hardware

All the software sources in the world won't do you any good if you can't get those accessory doodads we all secretly crave, or if your aging 8-bit suddenly poops out and lies useless for lack of a replacement part. In this respect the twilight market continues to function much the same as it always did (though perhaps with fewer distributors and lower sales volume). The mass merchandising retail outlets in my area never were good sources for hardware parts and accessories, and I began mail ordering those items years ago. It is our good fortune that most of the same companies who competed a few years ago in the cutthroat mail order market now completely dominate the twilight market. I'll run down the list alphabetically.

Alpha Systems. Long known as a specialty developer of novel 8-bit products, they actively promote their own 8-bit line in familiar ads featuring "Yoda" (from "Star Wars") to demonstrate their "MAGNIPRINT II+" graphics package. Their 8-bit inventory is built around 15-20 items all produced either in-house or from contract suppliers. You will often see selected Alpha products sold by other distributors, but their full line is available by direct order. Send for their free catalog at 1012 Skyland Drive, Macedonia OH 44056, or use your credit card for phone orders at 216-374-7469. Alpha's products are generally a good value, but their business acumen is a bit laid-back. If you experience a shipping delay or lost order, be patient and give them a call; they'll come through for you.

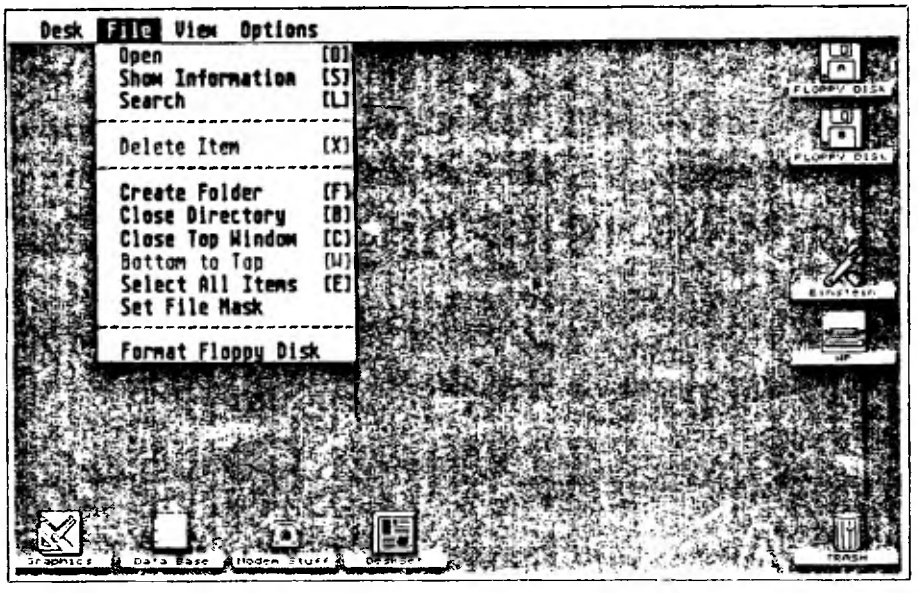
American TechnaVision. This company has been a stalwart supporter of the 8-bit market for many years, and, in my opinion, is the classiest. Their stock consists of commercially produced software, books, and new and replacement hardware and accessory items. Their sales office address is 2098 Pike Ave., San Leandro CA 94577 with mail orders to 15338 Inverness St., San Leandro Ca 94579. You can place orders toll-free at 800-551-9995, or call 414-352-3787 for information. These guys advertise aggressively and send out free catalogs several times a year. ATV accepts credit cards, and dealing with these folks is a pleasure: they are knowledgeable, competent, courteous, and professional. First-rate all the way, a showcase example of a mailorder business, a shining beacon in the 8-bit twilight.

B&C ComputerVisions. Another old-line outfit, B&C is the closest there is to an Atari 8-bit mini-mall. The single largest inventory of 8-bit products anywhere: hardware, accessories, manuals, commercial software, parts, PD software, oddball items, and things the cat dragged in. The latest issue of their free 26-page catalog arrived while this article was in preparation: their inventory already lists the new Newell 1-meg RAM upgrade announced by the Alchemist in September. Like ATV, B&C advertises aggressively, accepts credit cards, and maintains a toll-free order line, 800-969-8810 (for information call 408-749-1003).

The TT Desktop: Hands-on

Since the introduction of the revolutionary ST computer in 1985, Atari has maintained a growing committment to the use of graphic user interface technology in powerful, low-cost personal computers. GEM, the GEM desktop, and the underlying TOS operating system have been consistently updated over the past five years, becoming ever more powerful, sophisticated, and easy to use. Some improvements, such as the ability to auto-start GEM applications, have come about in response to customer demand. Others, such as the improved File Selector implemented in Rainbow TOS, have been prompted and influenced by third-party products, such as Gribnif Software's NeoDesk and A&D's Universal File Selector. In general, the process of improving the mechanics of the ST's user-interface, and enhancing the functionality of its

A stunning new version of the GEM Desktop debuts on Atari's new flagship system



The new Desktop, showing both device and application icons. Note the clarity that new icon types and customized icons add to the Desktop environment. Also, note the new Search and File Mask functions in the File menu.

metaphoric center — the ST Desktop — has by and large been gradual and evolutionary.

That's all about to change. With the release of the TT030, Atari will take a quantum leap forward in the amount of power it can offer the savvy personal computer user. And, as is only fitting, the advent of the TT has prompted a top-down reassessment of the system software that makes the ST line go.

Driving the changes has been the desire to offer greater access to information and greater power from within the desktop's basically familiar framework. As the metaphoric center of the TT working environment, the Desktop is a crossroads through which the user passes many times in the course of an average session with the machine. Most file- and disk-management; the majority of global system configuration work; device installation; application launching; and other important tasks are carried out within this domain.

The changes to the Desktop are many and various. In keeping with the TT's enhanced graphics capabilities, the Desktop now offers greater flexibility in defining the color of on-screen objects. The problems inherent with file proliferation on more and more capacious mass-storage media have been challenged by a new array of functions for defining the character and layout of items in a window, and for locating objects buried deep in complex subdirectory trees. All these new commands work to render simpler the kind of file-maintenance tasks that make up the majority of Desktop work.

Cosmetics, and More

The View menu, which defines the look of things on the Desktop, has been enhanced with several effective changes. In addition to the usual range of options by which the order of files on display can be controlled (i.e., sort by Name, Date, Size, Type), a new option, "No Sort," has been added, which shows the files in the order in which they actually appear on the disk.

Having access to this information can be important in certain circumstances; for example, when trying to arrange files in an /AUTO folder so that they execute in appropriate order on system startup.

The Size to Fit command prevents icons from being hidden beyond the left and right boundaries of a window. When this command is selected, icons automatically reshuffle themselves into rows that fit within the window's current width, as it is resized.

Set Color and Style lets you define background fill pattern and overall color for windows and for the Desktop itself, adding a level of coarse control to the finer control permitted by the new Control Panel "Window Colors" extension (see below). Pattern and color changes may be previewed before being imposed, reducing the chance of suddenly "losing" Desktop objects by setting them to the same color as their present background.

Volume Management

The Search command, new to the File menu, performs a file search on a floppy disk, logical drive, or folder. Highlighting a disk or folder icon and selecting Search causes a dialog box to appear, into which you may enter a wildcard expression denoting all or part of a filename. Clicking on OK begins the search, which proceeds in depthwise tree fashion through the current directory and all subdirectories within the selected volume or folder. If the Desktop finds a file that matches your search criteria, it opens a window and displays that file, then asks if it should continue the search. If you elect to do so, the same window is used to display additional files matching the same criteria. When all matching files have been found, an alert box is displayed.

The Set File Mask command also helps in gaining control over proliferating files, implementing a capability that users of NeoDesk have long enjoyed: the ability to display in a window only those files whose names match certain defined criteria. When you select Set File Mask, a dialog appears to let you enter a standard file-masking wildcard expression (for example, *.DOC), which is then imposed to define which files are displayed in the active window (the foregoing example will cause only those files with .DOC extenders to be displayed). The file mask remains in effect until changed, or until the active window is closed, at which point the mask is cleared and replaced with the "show everything" mask, *.*.

Window Management

A command called Bottom to Top has been added that is useful when you are working with multiple, overlapping windows. It causes the currently-active desktop window to be sent to the back of the window stack, and the one currently there to be brought to the top and made active.

File Maintenance

The command Select All Items causes all files and folders in the active window to be selected — very useful for doing mass deletes or file-by-file copies. Files hidden beyond window boundaries are also selected by this command, though files not displayed because they do not match file mask criteria are not selected, and will not be affected by subsequent global operations.

A universal Delete command has been implemented that permits mass deletion of groups of highlighted items: be these files, folders, or the contents of entire disks. Naturally, the command can be set to prompt before carrying out its function.

Several other, more global changes have been made to increase the amount of information about file history that is available to the user. Notable among these, read-only files are now marked with a triangle symbol next to their names.

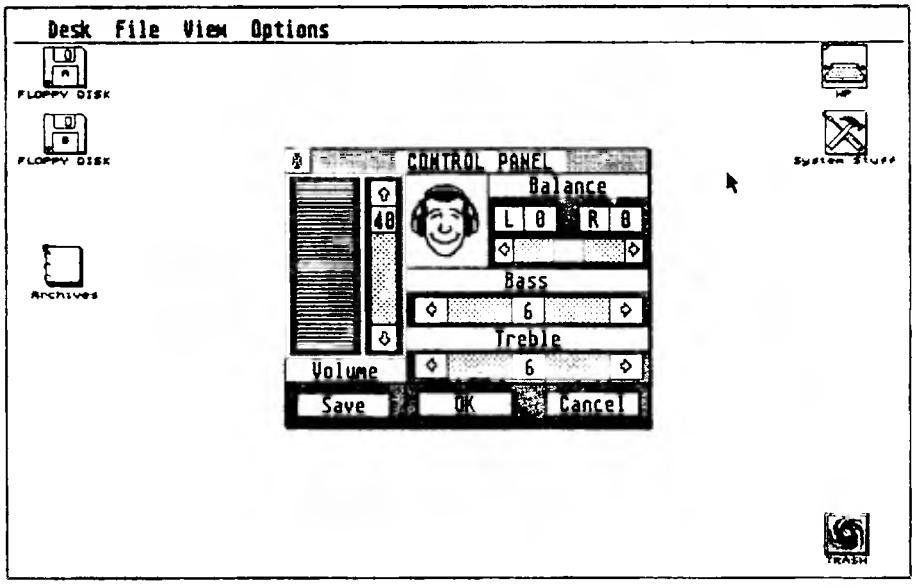
Icons on the Desktop

In keeping with the character of a graphic user interface, which treats files, disks, and other abstractions as if they were physical "objects," the new Desktop gives the TT user total flexibility in defining the appearance of Desktop icons and symbols.

Part of this freedom is granted through the new Install Icon functions in the Options menu. When Install Icon is selected, a dialog box displays, allowing you to select whether the icon you wish to install (or modify) is pertinent to the desktop itself (i.e., a disk, trash can, or printer icon), or to the display within a window (i.e., a file type icon).

In the case of the Desktop, sixteen detailed icon shapes are at your disposal, ranging from hard disks to printers. You can assign individual shapes to different objects, or by rubber-banding, to groups of objects, all at once. The point, of course, is to make the graphics on your Desktop more representative of the configuration of your system: making floppy disks look like floppy disks, hard-drives look like hard-drives, and printers look like printers. Individual files, or selected groups of files, can be dragged to printer icons for "text-dump" type printing.

For windows, even more freedom is at your disposal. The idea here is to permit you to define the icon display in such a way that not only file types (e.g., folders, executable files, document files, etc.), but arbitrary file categories are clearly distinguished from one another. Whereas the old default desktop icons would only distinguish between executable files and "documents," the new desktop will let you assign a unique icon to any single window item, specific group of selected files, globally to any file type (for example, assigning a "scroll" icon to word-processor docu-



The Control Panel's "Sound" CPX, one of several Control-Panel extensions included with the redesigned Control Panel. The image of the head turns left and right to graphically indicate stereo balance. Also note the customized "Black Hole" icon used for the trash can function. The "black hole as galactic epicenter" motif is more descriptive and accurate than similar "black hole" icons on competing GUI's.

ments and a "grid" icon to spreadsheet files), or even assign unique icons to arbitrary subgroups of files of the same type. For example, if you use the same word processor for both documents and correspondence, you can adopt a file-naming convention that distinguishes these types (e.g., ?????DOC.DOC for documents and ?????LET.DOC for letters), hand appropriate wild-card expressions to INSTALL WINDOW ICONS, and thus assign a unique "document"-type icon to each form of document file.

The actual icon forms are drawn from a configuration file called DESKICON.RSC, which since it takes the form of a normal resource file, can be edited and extended at will to provide new icon shapes not included in the default set.

Install Application

On the present Desktop, the Install Application function is somewhat limited. Though a specific file extender may be associated with an application, allowing autostarting of the application when an icon of that type is double-clicked, the file, the application, and its various support files must often reside in the same directory, or the application and support files must reside in the root directory of the relevant volume. The new Desktop adds significantly to this function, permitting you to control processing from Desktop level in much the same way as users of sophisticated command- line interfaces are accustomed to doing, but with far greater simplicity.

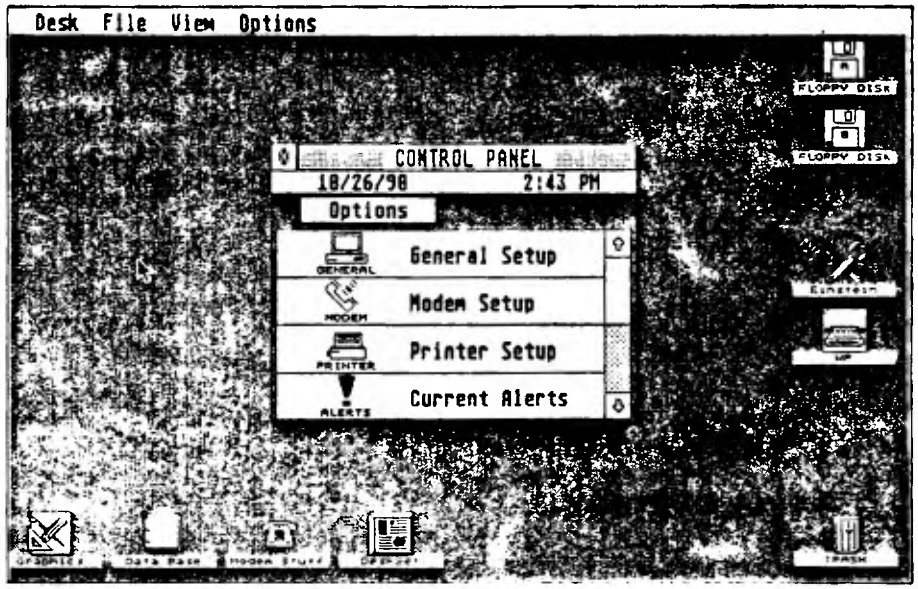
Not only can you link an application to a data file with a specific extension, but you can specify a full path for that application, so that the system can find it wherever it resides. You can also assign a default directory to the application, so that when executed via an installed link, it knows where to find its own support files (e.g., .RSC files), even if that differs from the current directory (top window). Certain current programs can make use of this information, while other's can't — all future software should be compatible.

The problem of programs that maintain partial paths, assuming, for example, that all text files are saved in a folder called "\TXT", is solved by a "parameter" assignment function that supplies only the filename of the relevant document, rather than the full path, to the auto-executed application. Again, this fix has been included to maintain compatibility with older software.

Arguments can also be passed to an application as a function of execution by installed link. While on the ST, arguments could only be passed to .TTP (TOS, Takes Parameters) programs, the TT now recognizes a new file type — GEM, Takes Parameters — that can also be used in this kind of transaction.

Further enhancements to Install Application include the ability to assign an application to open

from a function keypress (or shifted function keypress, permitting up to twenty applications to be so installed). As before, a single application can also be assigned an autoboot status, so that it starts automatically when you switch on your computer.



The new Control Panel's main CPX menu. Available Control-Panel Extensions are visible in the window.

Desktop Configuration

Establishing general control over these parameters, and adding further functions of its own, is the new Desktop Configuration dialog. The first set of buttons in this dialog let you tell applications system-wide to treat either the top window or their own directory as their default directories. The second set of buttons lets you control globally whether installed applications are handed only the filename, or the full pathname, of document files. Both of these global parameters, of course, are overridden by any individual, application-specific parameters defined when you install an application. Desktop Configuration also lets you review — again globally — the assignment of function keys to programs for one-touch execution.

More significantly, Desktop Configuration adds a totally new feature to the Desktop: one-touch menu-item selection. The function lets you assign a single key to any menu item, allowing you to execute it with a keystroke, instead of via the mouse. The Configuration dialog also displays system free memory.

All configuration details: colors, patterns, display characteristics, icon assignments, function-key entries, etc., are saved in a single configuration file, NEWDESK.INF, when the function Save Desktop is selected. Another new function, Read .INF FIle, has also been added, that permits multiple .INF files to be saved on disk, and imposed without having to reboot the system. As before, the default .INF file, now NEWDESK.INF, defines the auto-start configuration.

Finally, two additional convenience menu items have been implemented. Print Screen performs the screen-dump function now performed by pressing ALT-Help, and requires that SDUMP.PRG be installed from the /AUTO folder if an SLM laser printer is being used. Finally, there is a menu item called Cache, that permits the TT's 68030 on-chip instruction and data caches to be turned on and off — a feature important in preserving compatibility with certain present-generation software.

The Control Panel

Desk accessory programs, ranging from the Control Panel to on-screen calculators, disk formatters, terminal emulators, and other "instant-access" utilites, have always been important features of GEM and the ST. In fact, one of the few consistent gripes against GEM is the fact that it lets you install a maximum of only six desk accessories at one time.

Back in the old days, when 520K systems were the norm, this limitation made some sense. Too many desk accessories could eat up the RAM space quickly, squeezing out normal applications.

These days, however, when 2 and 4 Mb ST's are commonplace, the memory requirements of DA's are less of a concern. Another reason for the limitation is that accessories are passively multi-processed by the operating system, hence too many of them can consume an excessive amount of processor time. This objection is more cogent, though the high speed of a machine like the TT suggests it may be partially invalid, as well.

So why not simply increase the number of desk-accessory slots? Because that's only half a solution. For one thing, it doesn't provide an answer to the problem of accessory management. In any given work session, the average user will only call on one or two of his DA's, so why waste memory and processor time loading and multi-processing the others? And what about the problem of always having to store accessories on the root directory of the boot volume? Almost all ST power-users resent the annoyance of having to copy DA's from a storage directory to the boot drive and rebooting in order to install them, or having to pull down Show Info and change the extensions of three or four accessories from .ACC to .ACX (or similar), in order to prevent them from being installed on the next go-round.

There are other problems with GEM Desk Accessories, notably the fact that DA's are not informed correctly when video resolution changes occur without rebooting. So clearly, adding more DA slots isn't the way to go. Instead, Atari software engineers have come up with a more elegant solution that answers admirably to three opposing needs: the need for more desk accessory space; the need to conserve system resources; and the need to facilitate management of add-on programs. Their idea was to redesign the Control Panel, turning it into a manager for a new class of programs called CPXs, or Control Panel Extensions. The idea is loosely based on that of the Apple Macintosh's CDEV (Control DEVices) concept, though Atari's implementation is far more flexible, orthagonal, and extensible.

CPXs come in two flavors: resident and non-resident. They can be named active or inactive. Active, resident CPXs are loaded at boot time and remain in memory, instantly accessible through the Control Panel and its associated window for the duration of the session. Non-resident CPXs can also be accessed rapidly through the Control Panel, though these must be loaded from disk prior to execution — the advantage being that they can also be UN-loaded and/or RE-loaded without rebooting. Under normal circumstances, it's assumed that most of a user's CPXs will be non-resident, their memory requirements while inactive being thus reduced to an amount of RAM sufficient to store their icons and their names. And even resident CPX's are not multitasked, so if the user prefers — and has the RAM to spare — a large number of them can be loaded without imposing on system throughput.

The management problem is solved by the fact that CPXs can be stored in their own folder, distinct from the root directory of the boot drive. Managing them, through the Control Panel CPX menu and Setup dialog, plus the Configure CPXs CPX (note: a CPX that helps manage CPXs), is thus reduced to a series of procedures not unlike those used to manage resident fonts under GDOS.

Naturally, the fact that CPXs are not multitasked prevents them from doing some of the things that DA's can. For example, a CPX can't, while inactive, monitor and respond to GEM timer events. But a majority of DA-type applications don't require these facilities. A calculator DA, for example, does background processing sufficient only to determine when the user wants it to wake up and be a calculator. How much more efficient, then, to save processor time (and perhaps memory), by recasting such a program as a CPX, and pulling it into memory only when it's needed? Once activated, the CPX can take over the Control Panel window as long as it's required, and can be made to work more or less exactly like a normal DA.

When selected, the new Control Panel accessory (XCONTROL.ACC) displays a window full of CPX icons or filenames, any one of which can be activated by a double-click. The Panel itself has its own pull-down menu, whose first two selections are About (which displays copyright information for the Control Panel), and Setup, which gives access to additional system and CPX-management functions. When a CPX is highlighted in the Control Panel menu, three more menu selections are made active: Open CPX (which works the same as a double-click on the CPX name or icon), CPX Info (which gives version and status information about the highlighted

CPX), and Unload CPX (which causes a non-resident CPX to be removed from the CPX menu).

Clicking on Setup reveals another dialog box, bearing several items. One of these is a button that allows you to switch the displayed system time between 12 and 24-hour (European) format. The remainder of the Setup dialog is concerned with further aspects of CPX management. You can set the minimum number of slots available for CPX identifiers to any number between 5 to 99. Another editable object lets you enter a directory path for CPXs. Finally, buttons in the Setup dialog permit immediate reloading of all CPXs (under the assumption that you've changed the status of a CPX or made some other change), and permit access to a further dialog that allows you to move CPXs between the active and inactive list.

All further functions normally associated with the Control Panel are actually performed by CPXs. Five of these are included with the TT. The first standard CPX actually manages CPXs, letting you change their names, associated text and icon colors, and define them as RAM-resident or not.

Window Colors enhances the Desktop's own color and pattern-select functions. Window Colors lets you assign different colors to different elements of desktop windows (scroll-bars, bar backgrounds, full box, size box, etc.). In all, different colors can be assigned to each of the 15 elements of an active window, and up to five elements of an inactive window.

Window Colors includes ten preassigned color sets (as Leonard Tramiel says: "these range from very pretty to 'we couldn't think of any more pretty combinations.'"). The CPX also lets you select whether text in a window will be printed transparently over any background pattern, or will appear surrounded by solid color.

Further color sets can be custom-designed using the second CPX, Color Setup. The challenge of designing this CPX lay in figuring out a method for organizing selections from the TT's huge color range. The final design organizes the TT's 4,096 potentially-available colors in banks of 16 "inks", letting you scroll through ink-banks until you find one that approximates the set of colors you want. Individual inks can then be further modified, via a set of conventional RGB scroll-bars, before assigning the inks to a set of "pens" (actual color registers). Low-resolution, which can display up to 256 simultaneous colors, is an exception — when in low-res, Color Setup lets you scroll through the 256 available "pens" directly, modifying the color of each as you desire.

The General Setup CPX actually contains most of the functions that used to be associated with the Control Panel. It allows you to set the keyboard response and repeat rate, the mouse click response rate, and lets you turn keyclick, bells, and the internal speaker on or off. General Setup also includes a Cache select button, that gives global control over whether the 68030's caches are active or inactive at powerup. A cute "double-click test box" has been included that lets you experiment with changes in mouse response.

Sound Setup is particularly charming, letting you adjust the balance, volume, bass and treble quality of the TT's STe-compatible stereo sound output. Balance adjustments are done with reference to a little animated head, wearing earphones, that actually turns from left to right as sound pans from one speaker to the other. Finally, there's the Accelerator CPX, the latest and greatest version of Ken Baedertscher's Mouse Accelerator program. As in earlier versions, the program lets you select mouse speed from among three options and introduce a time-based screen-saver utility that changes screen colors after a period of inactivity, in order to prevent image burn-in. As in the Stacy, the "modem recognition" feature is included in the screen saver, which forces the system to monitor both modem and keyboard activity to determine what constitutes "inactivity."

Conclusions

Though the new Desktop and CP were designed for the TT, much of the software is fundamentally compatible with current ST systems, particularly the STe. It is likely, therefore, that within the next several months, the entire Atari ST community may benefit from its release.

Atari has succeeded in creating a successor to the original ST Desktop that very much parallels, in software, what the TT is designed to accomplish in hardware. Considered together, the new Desktop and Control Panel work within basically familiar contexts to extend, in economical, meaningful, and striking ways, the power of the ST line. ■

ATARI MEGA ST^{E}

The Atari Mega ST^{E} stands as a powerful force to be reckoned with in the world of serious business computers. With an increased processing speed of 16 MHz as well as an on-board cache, 4096 colour palette, stereo digital sound and graphics co-processor, the Mega STE is unbeatable by any computer in its class.

The Mega ST^{E} retains all the advances that made the original ATari ST™ so popular, such as a built-in MIDI, RF modulator with GENLOCK for receiving external video sources, plus parallel and serial ports for communicating with your industry standard peripherals and peers.

Equally important, the Mega ST^{E} offers a graphics user interface which is widely acknowledged as the most natural and intuitive way for humans to interact with computers. It also boasts a broad range of software spanning home, classroom and office applications. When it's time to consider which personal computer offers the most personal advantages, the Atari Mega ST^{E} leads the way.

Technical Specifications

Architecture

- CPU: Motorola 68000 running at 16 Mhz
- Bus: 16-bit external; 32-bit internal; 24-bit address
- FPU: Optional MC68881/82
- RAM: 2 – 4 MB
- ROM: 256 Kbyte internal; 128 Kbyte external plug-in ROM

Input/Output Ports

- All ports built-in
- MIDI IN/MIDI OUT
- Audio out: 2 x RCA jacks for left and right channels
- Connector for colour or monochrome monitor
- 2 x modem/RS232C serial ports
- 1 x high-speed DMA serial port or LAN port with DMA (Localtalk)
- Parallel printer port (8-bit parallel)
- External floppy disk drive port
- External DMA port for hard disk, CD-ROM or Laser printer
- Mouse/joystick (standard Atari connector)
- Controller/joystick/light gun ports: 2 x 15 pin high-density D connectors
- Cartridge port (128KByte capacity)
- Built-in RF modulator for connection to TV or VCR
- Built-in power supply
- Direct Memory Access (DMA)

Operating System

- TOS operating system entirely in ROM
- Hierarchial file system with subdirectories and path names
- User interface via GEM and mouse, with self-explanatory command functions
- Interface includes icons, multi-windowing window resizing/ repositioning/closing andpull down menus
- GEM virtual device interface

Graphics

- Includes graphics co-processor
- High resolution: 640 x 400 monochrome
- Medium resolution: 640 x 200 x 4 colours
- Low resolution: 320 x 200 x 16 colours
- Colour palette: 4096 colours
- Text display: 80 columns
- Hardware horizontal and vertical scrolling on a pixel basis

Sound and Music

- 5 x programmable sound channels
- Frequency programmable to 25 kHz
- Stereo DMA sound engine: built-in Two-channel digital/analog converter (DAC) play back digitized samples at rates between 6 kHz and 50 kHz on 2 channels; programmable volume/tone, balance
- Programmable sound generator: 3 tone generators; 2 noise generators; dynamic envelope shaping; wave shaping
- Includes Musical Instrument Digital Interface (MIDI) for connection to music synthesisers, sequencers, drum machines and other devices with MIDI interfaces

Software

- New desktop with enhanced features such as installing custom icons onto the desktop to represent drives, applications or files
- The new Control Panel accessory with extensions such as colour setup, sound setup, mouse accelerator

Keyboard

- Standard QWERTY keyboard format
- Low profile, sculptured ergonomic design
- 94 keys; 10 function keys
- Separate numeric and cursor keypads
- Keyboard processor to reduce CPU overhead

Mouse

- Supplied as standard
- 2 button control
- High precision, non-slip ball motion sensor
- Removable ball for easy cleaning

Floppy Disk Drives

- 9cm (3.5 inch) double-sided, 720 Kbyte
- MS-DOS format compatibility

277 Lane Cove Road, North Ryde, NSW 2113 (02) 805-0344

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ATARI TT030

The Atari TT030 is equipped to handle the critical skills you've learned on other computers; more importantly, it will extend your productivity. The enhanced multi-windowing user interface of the TT030 combined with the 32 MHz performance of its Motorola 68030 and 68882 processors combine to take you to new levels of performance.

For scientific and engineering applications, the TT has the power and speed to crunch numbers and enhance your performance. For graphics, CAD and desktop publishing, the TT has sophisticated video and CPU power as well as the software to provide genuine outline font technology.

There's one final feature the Atari TT030 offers that no other comparable computer workstation can match – value. With its many standard features, you no longer need to search for add-on cards, ports or boards; no need to purchase high-priced proprietary peripherals.

Whether as a standalone workstation or as the heart of a multi-user network, the TT has the connectivity and compatibility to fit your needs.

Technical Specifications

Architecture

- CPU: Motorola 68030 running at 32 Mhz
- On-chip cache and MMU
- Bus: 64-bit memory; 32-bit data, 32-bit address
- FPU: Motorola 68882 at 32 Mhz
- RAM: 4 MB, expandable to 26 MB
- ROM: 512 Kbyte internal; 128 Kbyte external plug-in ROM

Input/Output Ports

- All ports built-in
- MIDI IN/MIDI OUT
- Audio out: 2 x RCA jacks for left and right channels
- Connector for colour, monochrome or high resolution monitor
- 2 x modem/RS232C serial ports
- 2 x high-speed serial ports (SCC Zilog 8530)
- 1 x high-speed networking port (Localtalk)
- Internal A24/D16 VME card slot
- Parallel printer port (8-bit parallel)
- External floppy disk drive port
- External DMA port for hard disk, CD-ROM or Laser printer
- External ROM port (128 Kbyte capacity)
- SCSI port with Direct Memory Access

Operating System

- TOS operating system implemented entirely in ROM
- Hierarchial file system with subdirectories and path names
- Icon-based user interface, with self-explanatory command functions
- Interface includes icons, multi-windowing window resizing/repositioning/closing and pull down menus
- Interface can be customised by user

Graphics

- TT high resolution: 1280 x 960 monochrome
- TT medium resolution: 640 x 480 with 16 colours
- TT low resolution: 320 x 480 x 256 colours
- ST high resolution: 640 x 400 x 2 colours; user selectable
- ST medium resolution: 640 x 200 with 4 colours
- ST low resolution, 320 x 200 x 16 colours
- Colour palette: 4096 colours
- Text display: 80 columns
- Hardware horizontal and vertical scrolling on a pixel basis

Sound and Music

- 5 x programmable sound channels
- Frequency programmable to 25 kHz
- Stereo DMA sound engine: built-in Two-channel digital/analog converter (DAC) play back digitized samples at rates between 6 kHz and 50 kHz on 2 channels; programmable volume/tone, balance
- Programmable sound generator, 3 tone generators, 2 noise generators; dynamic envelope shaping, wave shaping
- Includes Musical Instrument Digital Interface (MIDI) for connection to music synthesisers, sequencers, drum boxes and other devices with MIDI interfaces
- In-built internal speaker

Software

- New desktop with enhanced features such as installing custom icons onto the desktop to represent drives, applications or files
- New extensible control panel with built-in programs such as colour setup, sound setup, mouse accelerator

Keyboard

- Standard QWERTY keyboard format
- Low profile, sculptured ergonomic design
- 94 keys, 10 function keys
- Separate numeric and cursor keypads
- Keyboard processor to reduce CPU overhead
- Easily accessible mouse/joystick connectors

Mouse

- Supplied as standard
- 2 button control
- High precision, non-slip ball motion sensor
- Removable ball for easy cleaning

Floppy Disk Drives

- 9cm (3.5 inch) double-sided, 720 Kbyte
- MS-DOS format compatibility

ATARI
Professional Products Group

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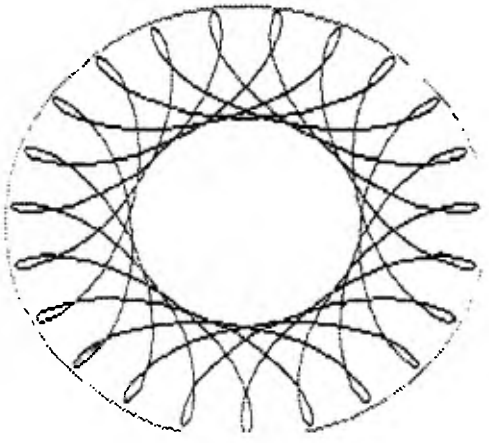
THE SPIROGRAPH REVISITED WITH LOGO

Greg K. Cambrell, Victoria, Australia
2 April 1991



Recently my son was given a school mathematics project on patterns with circles so we dragged out the old Spirograph (Denys Fisher Toys Limited, Thorp Arch Trading Estate, Wetherby, LS23 7BL Yorkshire, England). I thought it would be interesting to duplicate the action of the Spirograph on the computer. As I couldn't find any program which allowed you to feed in the sizes of the ring and wheel, or choose the position of the hole for the pen, I decided to blow the dust off my LOGO language disk and write a suitable program. The listing below is the result.

My first version, SPIROCY1.LOG, calculated the approximate change in the (x,y) pen coordinates from point to point as the wheel was rotated in increments. However, the present version, SPIROCY2.LOG, uses the exact formula for the pen coordinates of each point.

As the radius of the ring is increased to infinity, the wheel rolls along a straight line and produces a "cycloid" or a "trochoid" rather than a "hypocycloid" or a "hypotrochoid" (wheel inside ring) or an "epicycloid" or an "epitrochoid" (wheel outside ring). A separate LOGO procedure, CYC, was written for the straight line case.

README INSTRUCTIONS FOR THE LOGO PROGRAMS: CYCLOID2.LOG and SPIROCY2.LOG

Note: These applications are installed by the DESKTOP.INF file when the computer is rebooted with this disk in drive A. Just double-click on the desired *.LOG program within the SPIROGRA.PH folder. The LOGO.PRG program itself will then load automatically.

Note: This 1985 version of ST LOGO (by Digital Research) is buggy with TOS 1.4. The menu method of loading and saving files does not work, although the commands LOAD and SAVE "filename (or "pathname) do work.

Note: Medium resolution is suggested as only four colours are used.

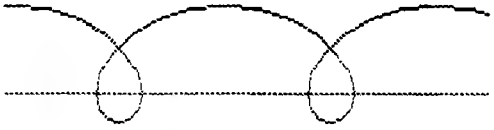
CYCLOID2.LOG

TO CYC :R :K :DA

To plot a cycloid, type CYC followed by values for three input parameters (separated by spaces) defined as follows:

:R Radius of the rolling circle (the wheel)
:K Fraction of the radius :R out to the locus point (can exceed one)
:DA Differential angle of rotation for each plotting point (in degrees)

Example: CYC 40 0.7 15



SPIROCY2.LOG

TO SPI :R1 :R2 :K :DA2 :REV

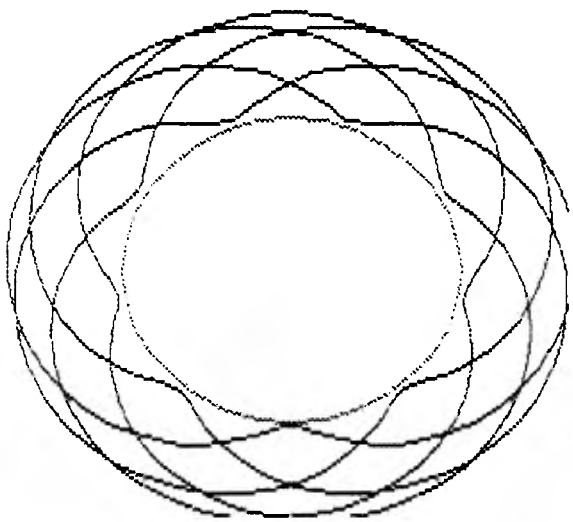
To plot a spirograph pattern, type SPI followed by values for five input parameters (separated by spaces) defined as follows:

:R1 Radius of the ring
:R2 Radius of the rolling circle (the wheel)
-- if positive the circle rolls inside the ring
-- if negative the circle rolls outside the ring
:K Fraction of the radius :R2 out to the locus point
(can exceed one)
:DA2 Differential angle of rotation for each plotting point
(in degrees)
:REV Number of revolutions to be performed around the ring

Example: SPI 162 72 1.2 15 4
Example: SPI 180 50 0.9 15 5
Example: SPI 105 -37.5 0.9 15 5

Listing of CYCLOID2.LOG and SPIROCY2.LOG written in ATARI ST LOGO

```
TO CYC :R :K :DA
; CLEAN
HT
PU
MAKE "XMAX 608 ; for medium resolution with full graphics window
SETPAN (LIST (:XMAX / 2) 0)
SETPC 3
SETPOS (LIST 0 (-:R))
PD
SETPOS (LIST :XMAX (-:R))
PU
SETPC 2
MAKE "C :K * :R
MAKE "X 0
MAKE "Y -:C
SETPOS (LIST :X :Y)
PD
MAKE "DAR RADIANS :DA
MAKE "ANGB 270 ; beginning ANG
MAKE "ANG :ANGB
MAKE "ANGR 0 ; include beginning offset
LABEL "LOOP
MAKE "ANGR :ANGR + :DAR
MAKE "ANG :ANG - :DA
MAKE "X (:R * :ANGR) + (:C * COS :ANG)
MAKE "Y :C * SIN :ANG
SETPOS (LIST :X :Y)
IF (:X > :XMAX)
  [GO "FINISH]
  [GO "LOOP]
LABEL "FINISH
END
```



```
TO SPI :R1 :R2 :K :DA2 :REV
; CLEAN
HT
PU
SETPAN [0 0]
SETPC 3
MAKE "GFILL "FALSE
PD
CIRCLE (LIST 0 0 ABS :R1)
PU
SETPC 2
MAKE "C1 :R1 - :R2
MAKE "C2 :K * :R2
MAKE "X 0
MAKE "Y -(:C1 + :C2)
SETPOS (LIST :X :Y)
PD
MAKE "DA1 :DA2 * :R2 / :R1 ; regard both DA1 and DA2 as being positive
MAKE "ANG2B 270 ; beginning ANG2
MAKE "ANG2 :ANG2B
MAKE "ANG1B -90 ; beginning ANG1
MAKE "ANG1 :ANG1B
MAKE "REVD :REV * 360
LABEL "LOOP
MAKE "ANG1 :ANG1 + :DA1
MAKE "ANG2 :ANG2 - :DA2
MAKE "X (:C1 * COS :ANG1) + (:C2 * COS :ANG2)
MAKE "Y (:C1 * SIN :ANG1) + (:C2 * SIN :ANG2)
SETPOS (LIST :X :Y)
IF ((ABS (:ANG1 - :ANG1B)) > :REVD)
  [GO "FINISH]
  [GO "LOOP]
LABEL "FINISH
END
```

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==========

* * GFAGEN7 . . . Brian LEHNE * *

GFA.BASIC Version 3. Tips from one who has learnt the hard way - No.7

==========

* RC_COPY *

Some RC_COPY Routines to add to GFAGEN6.

* CODE CHANGES *

The only changes required to the Code in GFAGEN6 to handle the extra Procedures, is to change the values below in the Procedure VARIABLES:
Change the Value of the Variable Pro¦ to 15 instead of 7.
Change the Value of the Variable Gen¦ to 7 instead of 6.
& of course add the following New Procedures.

* ABOUT RC_COPY *

RC_COPY can take Blocks of Screen from the Memory Screen or the Visual Screen & Display them elsewhere as required.

* SYNTAX *

RC_COPY S_addr%,Sx&,Sx&,Width&,Hight& TO D_addr%,Dx&,Dy&,Mode¦

```
where:  S_addr%=Address to Copy from
        Sx&     =Left X Coordinate              [Cx&] see Note2:
        Sy&     =Upper Y Coordinate             [Cy&] see Note2:
        Width&  =Width of Block to Copy             see Note1:
        Hight&  =Height of Block to Copy            see Note1:

and:    D_addr%=Address to Copy to
        Dx&     =Left Position to Copy Block to [Cx&]
        Dy&     =Top Position to Copy Block to  [Cy&]
        Mode¦   =Copy Mode 0 to 15, if no Value given the Default is 3

Note1:  When Copying a Block from Memory or Visual screen,
        as an example BOX 0,0,50,80
                      Sx&=0
                      Sy&=0
                      Dx&=51 as the Box is 51 Pixels Wide
                      Dy&=81 as the Box is 81 Pixels High

Note2:  If Destination=Source:  I use Cx& instead of Sx& & Dx&
                                &     Cy& instead of Sy& & Dy&
```

---

* NEW PROCEDURES *

```
>>>>>>>>>>>>>>>>>>> ROWS [RC_COPY] <<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
--------- Place Blocks in ROWS from Left to Right & Top to Bottom + Variation
++++++++++++++++++++++++++++++++ VARIATION ++++++++++++++++++++++++++++++++
    Blocks will be placed in the 4 Corner if Pces&=4 [increase PAUSE]
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
------------------------------------------- Also Branch to Procedure BORDER
Procedure Rows
  Pces&=100          ! Pces& : Use 4,16,25,64,100,400,1600 [Number of Pieces] *
  Numb&=Sqr(Pces&)                              ! Number of Pieces Across & Down *
  Xsize&=Div(Sce%(1),Numb&)
  Ysize&=Div(Sce%(2),Numb&)
  For J&=0 To Sub(Pces&,1)
    Cx&=Mul(Mod(J&,Numb&),Xsize&)
    Cy&=Mul(Div(J&,Numb&),Ysize&)
```

```
    Rc_copy Scrn_m%,Cx&,Cy&,Xsize&,Ysize& To Scrn_v%,Cx&,Cy&
    Pause 1 ! ++++++++++++++++++++++++++++++ Control Speed with Value of PAUSE *
  Next J&
  @Border
Return ! eeee
```

```
  Dim Mix%(Loop&),Mix$(Loop&)
  For J&=0 To Loop&                                          ! Jumble Pieces *
    Mix$(J&)=Chr$(Add(Rand(222),33))
    Mix%(J&)=J&
  Next J&
  Qsort Mix$(),Pces&,Mix%()                                  ! Jumble Mix%() *
  Numb&=Sqr(Pces&)                                ! Number of Pieces Across & Down *
  Xsize&=Div(Sce%(1),Numb&)
  Ysize&=Div(Sce%(2),Numb&)
  For J&=0 To Sub(Pces&,1)
    Cx&=Mul(Mod(Mix%(J&),Numb&),Xsize&)
    Cy&=Mul(Div(Mix%(J&),Numb&),Ysize&)
    Rc_copy Scrn_m%,Cx&,Cy&,Xsize&,Ysize& To Scrn_v%,Cx&,Cy&
    ' ++++++++++++++++++ Control Speed with a PAUSE in here or Value of Pces& *
  Next J&
Return ! eeee
```

```
  >>>>>>>>>>>>>>>>>>>> BLOCKS [RC_COPY] <<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<
  ---------------- This Procedure is used by: SPIRALIN SPIRALOUT UPDOWN & DOWNUP
                for Loop& use 4,16,25,64,100,400,1600 & change DATA accordingly *
Procedure Blocks(Loop&,Pse¦)
  Numb&=Sqr(Loop&)
  Xsize&=Div(Sce%(1),Numb&)
  Ysize&=Div(Sce%(2),Numb&)
  For J&=0 To Sub(Loop&,1)
    Read Dat&
    Cx&=Mul(Mod(Dat&,Numb&),Xsize&)
    Cy&=Mul(Div(Dat&,Numb&),Ysize&)
    Rc_copy Scrn_m%,Cx&,Cy&,Xsize&,Ysize& To Scrn_v%,Cx&,Cy&
    Pause Pse¦ ! ++++++++++++++++++++++++++++ Control Speed with PAUSE value *
  Next J&
Return ! eeee
```

Z*NET
The International Atari Newsletter

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New VP of Sales
New CD-ROM Player
Free Magazine to Premier
ST Emulator for PC?
New Games for the ST

April 1991 Volume III Number 4

ATARI REVEALS NEW COMPUTERS, PRODUCTS

Exciting new Atari computer products were announced by Atari at CeBIT: a new ST Notebook, a portable ST that makes the Stacy look like a mainframe; STPad, an experimental handwriting-recognition ST without a keyboard; a new model CD player; and more. CeBIT is the world's largest computer and electronics show. Held in Hannover, Germany, this March's show drew 500,000 people, up from 300,000 expected.

Atari's booth was about three times that of the recent COMDEX shows. In all, there were about 30 vendors inside the Atari area, all showing their own hardware and software for the Atari.

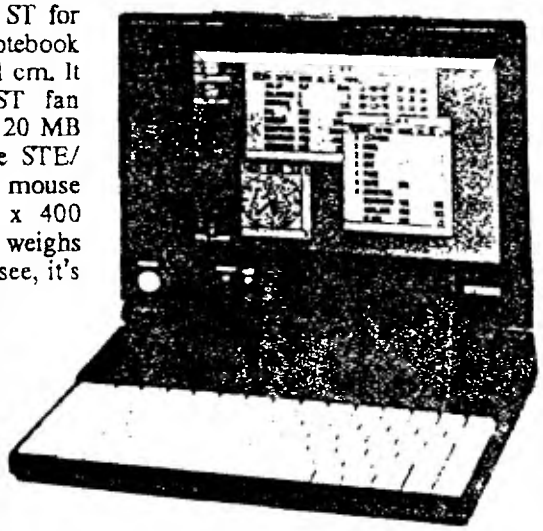
Here are the facts as presented in the Atari Press materials at CeBIT:

ST-Notebook

HANNOVER - The ST world has been waiting for this: a power ST for the brief case. The new ST notebook from Atari measures just 30 x 21 cm. It contains everything that the ST fan needs on the road: 1 MB RAM, 20 MB hard disk, 84/85 keys which are STE/TT compatible, joypad instead of mouse and an LCD screen with 640 x 400 pixels. And all of this together weighs around a kilogram. As you can see, it's very portable.

In order to keep up-to-date at home or in the office, you need to be able to swap data quickly too. This is why the new ST notebook is provided with a wide range of interfaces: bus connector, RS232, parallel and DMA.

There are also a range of extensions which do not belong to the basic model but are useful for a number of tasks: e.g. there is still space in the little notebook case for a data and/or telefax modem, which allows you to exchange data and faxes from any telephone when you are on the road. An external floppy drive lets you copy data to your disk.



Prototype ST Notebook

STPad

HANNOVER - Through product innovation, Atari is continously developing computer applications for a wide range of users. An excellent example of the ideas that come from the house of Atari is a completely new system - the STPad computer - which Atari is showing for the first time as a prototype at the CeBit Fair Hannover 1991. In order to work with this system you need neither a keyboard or a mouse. Data entry takes place with a device that everyone knows how to use: a pen.

The user writes with a pen on a touch sensitive screen in the same way as a piece of paper. The advantages of this new way of entering information are numerous.

The device is independent of the type of handwriting and even accepts Japanese characters or cyrillic characters just like it does coventional Latin characters. Also, you can instantly swap between writing text and drawing sketches. Furthermore, it makes it particularly easy for beginners to learn to use modern computer equipment.

Another special feature makes this device the ideal tool for people who do not have much practice in working with computers.

After finishing a task, the STPad

*Continued on page Z*5...*

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Z*Net Newswire...

Bill Crouch's position of Vice President of Sales at Atari US was filled in February by Don Mandell. Don comes to Atari from a similar position at WANG, where he concentrated on vertical marketing. He plans to use his expertise to help sell Atari to the packaged markets of desktop publishing, drafting, etc. Already out and selling even before settling in his Sunnyvale office, Don is very impressed and encouraged with the possibilities offered by the TT and Calamus, Dynacadd, and others. Mandell has been as long time associate of Jack Tramiel, owner and chairman of the board of Atari, and worked with Jack at Commodore years ago.

Atari Canada will provide dealers with posters and promotional material which offer any purchaser of an Atari ST a five hundred dollar training allowance towards a course offered by the Institute of Communication Arts. ICA, one of the most respected digital arts learning institution in North America, uses Atari equipment connected to the latest music equipment to specialize in teaching high-tech digital recording techniques.

Atari Canada announced new retail pricing at $499.00 cdn. Murray Brown, West Coast Sales Manager for Atari stated that Atari is taking a get tough approach. With the new pricing, you can now purchase a 1040STE, color monitor and 30 meg hard drive for the same price as a Mac Classic, which comes without a hard drive, MIDI ports, stereo sound, built in operating system, color, etc. Canadian national advertising is planned.

Quill Publishing, publishers of ST JOURNAL MAGAZINE, have replaced the Journal with ATARIUSER, the first and only free Atari-specific magazine. 30,000 copies of ATARIUSER will be distributed free internationally through computer stores, Atari dealers, developers, distributors, and registered Atari user groups. Some major bookstores will sell it for $1.00 per issue. Subscriptions to ATARIUSER are available, direct mailed for $12 a year. Subscribers to ST Journal will be contacted regarding conversion to extended ATARIUSER subscriptions. AtariUser will cover the ENTIRE Atari computer product lineup, including the TT, STe, ST, MEGA, MEGA/STe, Portfolio, Lynx, and even the out-of-production Atari 8-bit series of computers. The first monthly issue of the advertiser-supported magazine will be released in April. Lead time will typically be less than two weeks between final edits and distribution. Dealers and user groups interested in providing ATARIUSER monthly, free, to their customers and users should contact Quill Publishing directly. ATARIUSER/Quill Publishing Co., 113 W. College St., Covina, CA 91723, 818-332-0372.

Users of a public domain floppy disk formatter for the ST may be heading for data disaster. DUALFORMAT, a program that will format two disks in two drives at once, reportedly has a bug that can cause it to cease to create unique serial numbered disks after a number of uses. This creates disks that your ST can't tell apart. Swap disks with the same serial number, and the computer will not know to start fresh, and will write parts of the old disk directory into the new one... trashing the file structure beyond repair. Users and BBS SYSOPS might want to remove DUALFMT.ARC from their file library for their own safety.

Darek Mihocka of Branch Always Software (Quick ST) has confirmed rumors that he has a functional 68000 emulator working on an IBM platform. He calls it the GEMULATOR, and it requires a 386 or higher CPU. So far, GEMULATOR does not include emulation of the Atari ST hardware or video, so it is NOT yet an ST emulator. Darek says that further development of the Gemulator will wait for this summer after he completes and ships Quick ST version 3. Darek hints that the ST emulator, when completed, will be intended to run under 32-bit Windows (from MicroSoft, Darek's "real" employer), which is not yet even scheduled for release. Most Atarians recall when Darek created the "ST Transformer", an emulator of 8-bit Atari computers for use on the then-new ST line. Atari was not amused at Darek's intention to use the copyrighted Atari operating system, in file form, which was required for use with the ST Transformer. An agreement to allow Public Domain distribution was worked out in that case, based in part on the free distribution of the 8-bit OS that Atari itself had promoted via its own "Translator" disk for later model 8-bit Ataris. Atari also permitted third party companies to create and sell derivative "translators", weakening their claim against use by Darek and his followers. However, this time around, Atari has been much more careful in limiting non-ROM use of the ST TOS operating system. Mihocka may be in for a legal battle of serious proportions if he expects to distribute an emulator that relies on what simply must be defined as a pirate file: TOS (1.0 or higher) on a disk.

DIAMOND BACK II, an outstanding hard-drive backup application by Bob Luneski, is now distributed and supported directly by Bob's Oregon Research Associates, ending Data Innovations' distribution. Overseas distribution will be by SofTrek, the TurboST folks. A new version is available that includes significant speed optimizations, many new backup and restore options, and added support for backup/restore of Spectre 3.0 partitions. Upgrades to Diamond Back II V2.20 are only $7.50 and include a completely new manual. You must return your original disks. Oregon Research Associates, 16200 S.W. Pacific Hwy., Suite 162 Tigard, OR 97224, Phone: (503) 620-4919 FAX:(503) 639-6182.

CodeHead Software announced HotWire 3.0 and MaxiFile 3.0 in March. HotWire 3.0 is now fully compatible with the Atari TT as well as the Mega STe, all resolutions on all Atari computers including all large-screen monitors. The auxiliary programs included in the packages are also now TT-compatible. With a single keypress or mouse click you can start up to 74 programs, documents, menus, ASSIGN.SYS files, MultiDesk Setup Files, or work files. Other enhancements, bug fixes, and user interface tweaks make this new version of HotWire a MAJOR upgrade. HotWire 3.0 is $44.95. MaxiFile is a full-featured file maintenance utility that offers virtually every disk and file related feature available from the desktop or any other Atari file utility as well as unique features not available in any other program. Improvements in version 3.0 include new icons, keyboard commands, enhanced file veiwing, recoverable delete,

Continued...

...Z*Net Newswire

remarkable search functions, help screens, and more. It is also VERY fast. MaxiFile 3.0 is $39.95, or you can get HotWire Plus - - HotWire packaged together with MaxiFile for $69.95. Upgrades are also available for $10. CodeHead Software, PO. Box 74090, Los Angeles, CA 90004, (213) 386-5735, FAX (213) 386-5789, BBS (213) 461-2095.

➪ Page Design has released a new version of The Calamus Font Resource Guide, featuring over 500 font samples for use with Calamus or Outline Art. All currently available Calamus fonts from Cherry Fonts, Compugraphic, DMC (Calamus Designer Fonts), FontAbility, Fonts By Guber, Ideal West, Mainstream Fonts, Mirthful Fonts!, MS Design, Dennis Palumbo, Safari Fonts, and pd/shareware fonts are displayed. The Guide also contains information about all Calamus products distributed by ISD, GENUS (formerly TypeCad), FontVertet, Font Designer, The Calamus Font Utility, and WP to GEM. $19.95, PDC (Public Domain Corp.) 4320-196th SW, Suite B-140, Lynnwood, WA 98036-6721, (800) 255-8220.

➪ CALASSISTANT, an online help accessory for use with CALAMUS DTP software, is a new release of Spar Systems. Using a desk-accessory approach to provide Hypertext-like interface, CalAssistant offers "tear off" style menus leading to text, icons, and pictures giving instruction and tips for using Calamus features. Two meg of memory and a hard drive are recommended for simultaneous Calamus and CalAssistant usage. Tutorial files, utilities and fonts are also included in the just released $34.95 package. Spar Systems, 381 Autumn Avenue, Brooklyn, NY 11208, (718) 325-3169.

➪ Late February press releases from Ocean Software through Electronic Arts Distribution announced four more new game releases for the Atari ST computers:

* F-29 RETALIATOR (ST and AMIGA, Ocean Software, $49.95): A futuristic flight simulation with four battle scenarios and 100 missions to fly. Real-time cockpit, internal and external viewpoints and fast, detailed graphics.
* NIGHTBREED (ST, PC, and AMIGA, $39.95): Based on the Clive Barker horror film, you are Aaron Boone, fighting both to save the race of the supernatural "Breed" from both the police and a villain called "The Mask". An interactive adventure.
* THE UNTOUCHABLES (ST, AMIGA, and C64, $39.95): Another movie action/ adventure conversion. Control Eliot Ness's squad in "spectacular busts, raids, shoot-outs and duels" in Mafia-infested 1920's Chicago."
* LOST PATROL (ST, AMIGA, PC, $49.95): It's 1966, and you and six other soldiers are crashed in central Vietnam. Will you survive the 57 mile trek through enemy forces with little food and less ammunition? This strategy adventure allows you to deploy your troops as you see fit... and one of your guys just might be a psycho!

➪ A US based company with ties in New Zealand and Malaysia continues to amaze the computing world with their innovations in the cd-rom world. Whitestar Mageware of Sante February NEW MEXICO have successfully completed their port from the Atari ST to the MAC and IBM platforms of the game " Golden Immortal".

➪ Populous 2 will be released later this year, according to UK's ST-FORMAT magazine. The sequel to the best selling Populous will include over 200 different animations, compared to Populous' 20. The landscape will also be fully animated with terrain-sensitive land blocks. Buildings and cities will literally grow, rather than just transform as they did in the original Populous. Displays will be four times faster with ten times the depth. Meanwhile, a revised version of the STe compatible Populous is on its way to correct a lockup problem occurring for some users.

➪ The Windsor Atari Users Group of Windsor, Ontario, Canada and the Washtenaw Atari Users Group of Ann Arbor, MI are hosting the Windsor/Detroit International AtariFest on May 4-5, 1991 at the St. Clair College of Arts and Technology in Windsor. More than 20 vendors are signed up so far, plus support from both Atari US and Atari Canada. Contact Craig Harvey, President of WAUG - Ann Arbor at (313) 994-5619 or Brian Cassidy, President of WAUG - Windsor at (519) 966-0305.

➪ For a third year, an AtariFest is planned at Indianapolis, Indiana on Saturday, July 27th, sponsored jointly by the user groups at Indianapolis and Bloomington known as MIST (Mid-Indiana ST). MIST AtariFest III will be held at CADRE, Inc., 6385 Castleplace Drive, Indianapolis, In. Leave mail on GEnie to W.LORING1, or call 812-336-8103.

➪ The Southern California ATARI Computer Faire, Version 5.0, also known as THE GLENDALE SHOW has been confirmed for September 14 and 15, 1991. The Glendale Show was the first joint ATARI-User Group sponsored show in the nation, and last September featured the largest array of Atari vendors ever formed at a domestic consumer show. Contact: H.A.C.K.S., 249 N. Brand Bl. #321, Glendale, CA 91203, or call John King Tarpinian, Faire Chairperson, 818-246-7286.

➪ Nutek Computers says that it has developed Macintosh-compatible ROMs and operating system software. Until now, Macintosh-compatible computers have required that the buyer supply actual Mac ROMs and system software. Nutek's operating system will run all Mac software, but in order to avoid copyright infringement uses a GUI based on OSF/Motif, giving their Macs a more robust 3-D interface than actual Macs. Presumably, the hardware portion of Nutek's package will be compatible enough to run true Apple system software such as the upcoming System 7.0. Nutek soon plans to offer a full line of Mac clones and will offer their technology to other developers. No release dates have been announced.

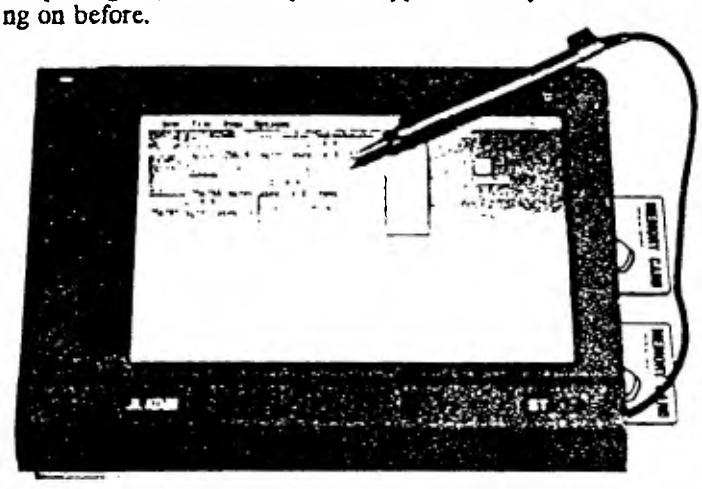
➪ SyQuest Technology announced its new generation of its drives and 88 Mbyte double-density cartridges, doubling the popular earlier 44 Mbyte design. Called the SQ5110, it is to ship in limited quantities early in the second quarter and in volume in June. Only a few OEM manufacturers will be supplied at first, with average unit prices to be $1,800, with extra high-density cartridges at $200 to $250. The new drives will be even more reliable, and will read but not write the 44-Mbyte SyQuest format, and will be even faster due to an improved buffer system. The current SQ555 mechanism sold 150,000 units last year, and will remain in production.

Call the Z*Net BBS - 201-968-8148

NEW ATARI PRODUCTS!

continued from Page 1

automatically switches to "stand-by" without requiring the user to save the data manually. When you start working with the pad again, the same picture appears that you were working on before.



Atari STPad - Keyboardless ST

The STPad has the same footprint as a DIN A4 page. It is 3.5 cm high and weighs only three pounds and is thus a featherweight under portable computers. Due to a new type of hardware dedign, Atari has managed to power this battery operated unit for more than 10 hours without recharging.

The STPad is available in two versions, with a main memory capacity of 1 or 4 MB respectively. The unit runs the Atari TOS operating system and is compatible with the ST and TT models - exisiting programs can also be used if they have been designed for a monochrome screen with a resolution of 640 x 400 pixels.

Instead of heavy disk drives which take up a lot of power, this system has two so-called "silicon drive" slots. According to your requirements you can use them either for RAM chip cards (for data storage) or ROM chip cards (with application programs). Chip cards with a capacity of up to 4MB can be used in eah slot, i.e. considerably more than with conventional disk drives. The STPad is provided with a number of interfaces to communicate with the outside world: MIDI, RS232, parallel and DMA, and for those who want to write quickly with the conventional 10-finger system on external keyboard.

Developers Package V

HANNOVER - Atari is now offering a powerful Unix development environment for the Atari workstation TT/030. It is based on Unix V, release 4.0. Atari System V includes X/Window as the graphical interface and thus offers a high degree of compatibility to international standards. X/Windows is network-based and allows you to operate programs from a local workstation that execute at a remote host.

For developing modern object-oriented solutions, the Atari Developers Package V includes the powerful languages C and C++. Together with the user environment VSF/Motif and a number of software interfaces, the Developers Package V thus offers comprehensive design and development possibilities for the Unix world.

With this Unix package, Atari wants to further extend its engagement in technical and scientific applications. A large number of Atari computer systems are already being used for applications in thise fields, and the Unix standard is becoming more and more important in the CAD/CAM world too. The Developers Package V for Unix is available in network or stand alone versions and requires a TT/030 workstation with 8 MB RAM, 200 MB hard disk and a TTM 194 19" monitor.

FACT SHEET:	***ST Notebook***	***STPad***
Processor:	*68000*	*68000*
Clock Frequency:	*8mhz*	*8mHz*
Main Memory:	*1 or 4 MB*	*1 or 4 MB*
Hard Disk:	*20, 40, 60 MB*	*None*
Interfaces:	*2 x MIDI*	*MIDI*
	RS232	*RS232*
	Parallel	*Parallel*
	DMA + FDD	*DMA*
	Numeric Keyboard (external)	
	Bus Connector	*Bus Connector*
Keyboard:	*84 Key (STE/TT Compat)*	
	Built-in Joypad	*Pen*
Options:	*Fax Modem*	
	External keyboard	*Ext. keyboard*
	Mouse	
	4MB Floppy Drive (external)	
Operating Time:	*(?)*	*Max 10 Hours*
Slots:	*(?)*	*2 Silicon Drives*
Screen:	*LCD 640x400*	*LCD 640/400*

Atari Developers Package V for Unix

Includes:	*Unix V, Release 4.0*
	Elements of XENIX and BSD
	Virtual File System (VFS)
	X/Window, Release 11
	Motif user interface
	C (Version 1.37)
	C++ (Version 1.37)
	Debugger, shells
Only in the network version:	
	TCP/IP
	Remote File Sharing
	BSD Sockets

The ST SOFTWARE SHELF

Compiled by Ron Berinstien

Files submitted to CodeHead Quarters BBS, 1610 Vine Street, Hollywood, CA 90028, 213-461-2095, and others downloaded from GEnie and Delphi were used as source material for the list.

MUSIC STUDIO data files from Fresh Aire II by the Mannheim Steamroller. VELVET.SNG, SHADETRE.SNG, INTLUDE7.SNG, INTLUDE5.SNG, EMBERS.SNG, AMBER.SNG, BACHSES.SNG, GTAPLACE.SNG, TUTALUTE.SNG and REDWINE.SNG.

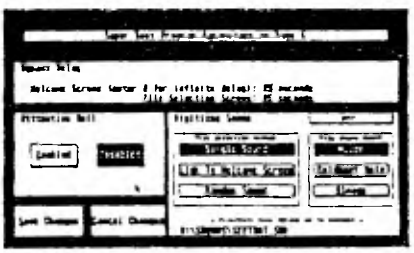
DMJ-GIF.ARC - a new GIF to Spectrum picture converter. This one is SLOW but far superior to any previous converter due to its conversion techniques, explained in the included manual. Written in GFA Basic 3.0.

AREACODE.LZH and POSTAL22.LZH have both been upgraded to versions 2.2 each. Both PRG/ACC/TOS (rename as you wish) type programs, the former will locate and identify telephone area codes in North America, the latter, will give you zip code information.

SNAPIT.ARC replaces the Alt-Help screen dump without the need of a menu bar, and, with the ability to be turned on and off without rebooting. Instant Degas format "snaps" are taken of the screen. Look for them in the root directory of the drive the program is in.

ICD released its new complete (351K) Host Adaptor Disk that contains v.5 booter for TT compatibility and some new utilities. STHOST-E.ARC is available on GEnie, NOT on local boards. READ-ICD.ARC was inadvertently left out of the ICD booter update file. It is now available. And, HDUTIL.ARC corrects some problems with v.4.01.

SPBT70.ARC (shareware $15) Superboot v.7 is out! It now includes Digitalized Sounds, and, STARTGEM can now be changed. Plus, bugs fixed include one that allows the program to properly recognize certain folder extensions, and Degas Compressed now works too. For convenience STARTGEM (PD) is also included in the file.



MORIADIS.ARC - UMORIA 5.2.2 is a single player dungeon simulation text game that unlike some other text games displays a picturesque map of events. This is a game for someone who is nothing less than a game expert! The text file describing the game's rules, 100K! And you have to read another file for installation instructions! This is a game player's game. Color/Mono

TYPTUTOR.ARC will tell you word for word about your errors! It will measure your typing speed, and allow you to make your own tests as well. A quick and easy, to the point, type of program. (puns not intended!) ‹sure›

CALAMUS FONTS: MEDICI.ARC, ZALESCAP.ARC, and LEECAPS, and the nice Art Nouveau font HORSTCAP.ARC are up and available for downloading. Unlike the others though, HORSTCAP.ARC only features the letters, no numbers, commas, etc. MICRON.LZH (shareware $15) provides four very complete fonts. The Micron font family provides a headline font similar to Eurostyle Extended or Microgamma.

GEMINI12.LZH (shareware DM50-) Version 1.2 of GEMINI the popular German desktop replacement system. The file (twice the size of the last version) provides VERY well documented directions. Small or large Icons can be yours at a click of a button, sorting, viewing, selecting, etc. The authors state that it is still in development. It is, however, in it's present state very complete, and well thought out.

STTOOLS.ARC (Shareware $10) ST Tools v.1 is similar to PC Tools for MS- DOS machines. An analysis of the Fat tables and disk structure yields a window filled with a disk tree and another with the root directory contents. A hex dump, editing, sorting, and more are possible choices.

DISKFIX2.LZH provides hope for those that encounter the old, "Data on the disk in Drive A: may be damaged" alert box, and for those that find garbage in their file selector. This program might well work for your floppies, and, although not fully tested yet on hard drives, might help those with problems.

VIEW.LZH (shareware $5) VIEW picture viewer doesn't provide color cycling yet, nor will it work with monochrome monitor emulators, but, if you install it in your desktop.inf file with the install program provided it will allow you to view many ST picture formats including, Neo, Degas, Art Director, Spectrum, Tiny, and Doodle.

TT-M-PEN.ARC is the German TT Plot program called Magic Pen. Still being developed, but, it works in all ST/TT resolutions and in TT low you can use 256 colors. TTMP-IMG.LZH is a sample that can be viewed on a TT.

VEKTOR.PRG is a self extracting file that runs a very nice 3D graphics demo from Europe.

ANCOOL.ARC is a very well received 4096 color STE demo. Low Res.

APROCALC.ARC lets anyone figure anything that they want to figure! A full functioned desktop calculator that provides an online information screen, will let you calculate scientific and trigonometric functions, and also will allow you to use it as a full math calculator in binary, octal, decimal, or hex. Ten memories, 50-level parenthesis, 10 digit floating point display with two digit exponent, 16 digit decimal display. ACC or PRG. My only adverse comment: it sure is small, and it is a bit hard to read the display boxes and information screens.

NOTE: A Z*Net reader notified us about a program called DUALFRMT.ARC which is available on some local BBS's and the pay services. It appears to have a programming error that will make it fail to create unique serial numbers on disks, making it impossible for your ST to tell disks apart. The result can be trashed disks. Beware!

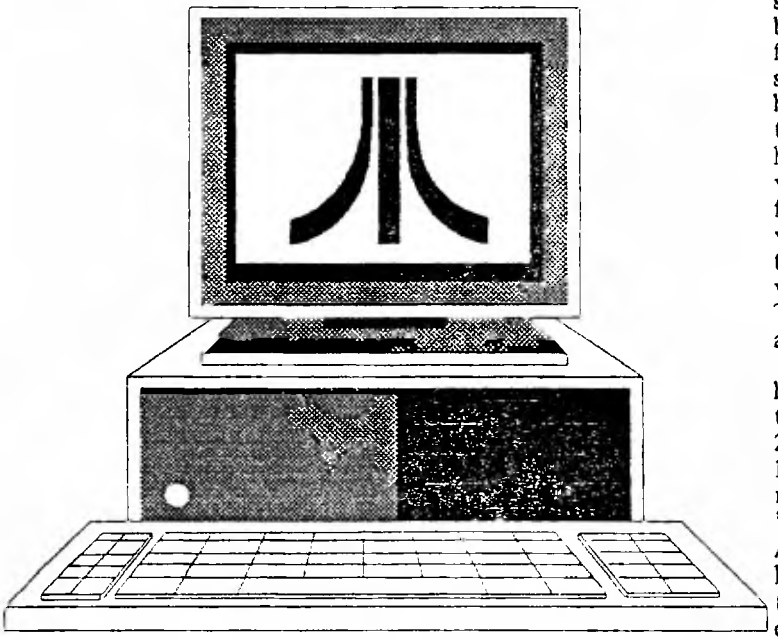
ST or IBM? Or MAC? Or...

by Carlis Darby

I have seen several articles in some of the online ST magazines regarding STs vs PCs, about Windows v3.0 vs. the ST's GEM interface etc. I must say that I am surprised at some of the statements.

Before I get started, let me state that I am a Systems Engineer for a national chain of computer stores and use high end PC Compatibles on a daily basis. While I would not consider myself an expert in all operating systems, I am at least familiar with many different operating systems on the PC's. I have worked with DOS (and Windows 3.0), Xenix/Unix, Novell's Netware, 3Com, Corvus and several others. Many of you know me as the Sysop of HyperSpace I BBS (Fnet Node #391) or as the person who took over the programming of Space Empire Elite Online InterBBS Strategy game.

It has been exciting watching the computer industry evolve over the past years. So many changes happen so quickly that it becomes almost an impossible task to keep up with them. Seems that every week there has been a new breakthrough in one field or another. When I purchased my first ST back in February of '86 (520ST w/512k, single sided drive and monochrome monitor), I was in hog heaven. Having used an old Atari 400 for a while, then purchasing a Commodore 64, I was in the market for a new computer about the time the ST come out. I was seriously looking at a Commodore 128 when I started comparing "power and price". After seeing I could get an ST with monitor and drive for about the same price as a C-128 and disk drive, I knew I had found my next machine.



In '86, the PC's were just coming around to a widespread standard and a typical system would have 256k or 384k of memory. Back then 640k was as much as you needed for just about anything. The 1040ST was a computer ahead of its time, coming standard with 1 meg of usable memory and a 720k 3.5" DS DD and running at 8mhz. The ST is a HOME computer and a lot of business machines were not even 8mhz at the time.

My point is simply this: it has taken the PC industry about 4 years to get up to the standard that the ST is now. Only recently have PC's come out that are as powerful AS WELL as being as affordable to the average home user.

I now see a lot of people "jumping ship" to the PC world in the fear that the ST is doomed. You here things about "no support from Atari", "Atari owes us" and "no software support".

First of all, why are so many people surprised that Atari doesn't support the ST any better? Did they support the 8bit? What does Atari owe you? I don't see anywhere in the documentation where it promises me anything. Sure, I would like to see Atari come out with national advertising, better customer support, and better dealer support. But get real, these are things that Atari has NEVER had so why get worked up about it?

As far as software support is concerned, the amount of software that is available for the ST is minute compared to what is available in the PC world. But there are few pieces of end user software available for the PC that I cannot find for the ST that is comparable or actually superior. Again, let's keep in mind that the ST is a HOME computer and not a business machine so to compare business end software to what is available to the ST is not a true comparison.

As for Window's 3.0... it looks nice, it comes with lots of really nice programs, it allows you to use over the 640k barrier, it allows you to have more than one application open at once. It does all those things, but as far as I am concerned, it is slow...that's right slow. I brought some of my ST friends to work one day to show it to them. They had heard me say how slow I thought it was, but had heard how great the PC world said it was, so they wanted to see it for themselves. They played with it for a few minutes and turned to me wanting to know why I thought it was slow. They commented that it was about the same speed as GEM.

With that I had to agree, however, I pointed out to them that they were using it on a 25mhz 80386 with a 40mb 19ms SCSI Hard Drive and 2 megs of RAM and it was "just as fast" as an 8mhz ST. And how many home users have a 25mhz 80386 sitting at their house? Yeah, Windows does a lot, but GEM still suits my needs as far as home usage is concerned.

How much life is left in the ST? Who knows. The ST has already been around for over 5 years through which the PC's have gone through many changes. I think it has at several more good years left in it. I know that my ST does everything I want it to and then some.

So to those of you who have PC's or are getting one, more power to you. Don't bother trying to "convert" this user who is still in love with his machine. I am sure that one of these days, I too will have to trade in my ST for something a bit more powerful. It could just as easily be another Atari product or maybe something else altogether.

For now, I enjoy coming home to my ST. I have no intentions of "jumping ship" in the near future. I am still having too much FUN!

Z*NET: Who Are We, Where Are We Going?

by John Nagy and Ron Kovacs

Anniversaries... they make us think about the past and the Future.

Ron Kovacs is about to begin his SEVENTH YEAR of weekly online publishing for Atari users. March marked the beginning of our third year of Z*NET MONTHLY, our hard-copy newsletter supplement that has served over 50 user groups world-wide.

ROVAC INDUSTRIES, Inc. was legally incorporated in 1989 in the State of New Jersey by Ron Kovacs for the purpose of furthering what had, until then, been a solo, totally volunteer effort to bring Atari users the best information available. John Nagy became a regular contributor, editor of the monthly newsletter, and staff manager for the growing number of "Z*projects". The online magazine remains 100% volunteer supported, non-commercial and non-profit.

In 1990, "Z*NET International Atari Online Magazine" became the single name for what had been ZMAGAZINE and ST*ZMAGAZINE. Distribution of the weekly electronic magazine under Ron's editorship was on CompuServe, GEnie, Delphi, USENET, and over 600 registered carrying private bulletin board systems. Later in 1990, Z*NET entered the FNET system and has primary distribution to 50 FNET BBS systems... and ultimately to perhaps thousands more independent BBS systems around the world. Z*Net maintains staff writers in the USA, Canada, England, Germany, New Zealand, and Japan, with correspondents in many other countries.

On GEnie alone, JUST the 1990 Z*NET issues have been downloaded 30,000 times (thirty THOUSAND!), with another 8 THOUSAND downloads of related files, pictures, Z*BREAK news bulletins, etc. This made Z*NET the NUMBER ONE ONLINE MAGAZINE and the most prolific of ALL GEnie contributors in 1990! We are convinced that part of what makes us respected and popular is Z*NET's continued resolve not to preach, push, pirate, or pander.

During 1990, Z*NET continued to evolve. First, the Z*NET NEWS SERVICE was featured as a regular contributor to the German magazine PD JOURNAL. Later, Z*NET NEWS SERVICE was recognized by several British Atari magazines, and was also quoted as an original source in reports appearing in non-computer-specific national news services. Reprints or quotes of Z*NET articles appear regularly in almost every user-group newsletter and have also appeared in many commercial publications including COMPUTER SHOPPER, ST INFORMER, ST WORLD, CURRENT NOTES, AIM, PSAN NEWS, and while in publication, ANALOG, ST-LOG, and ANTIC. In 1990, Z*NET became a continuing column in ST JOURNAL magazine, then moved to become the exclusive news agency for START, the largest US Atari magazine.

Z*NET was first with major Atari stories. The 32mHz TT, Elie Kenan resigning, layoffs, the MEGA STE introduction, and more stories were broken by Z*NET special reports. Even though many of those stories were denied vigorously by Atari officials and decried by other publications, each of them came to be shown as true, accurate, fair, and FIRST. By Z*NET's writers doing on-site reporting at major Atari events, including live mini-conferences and pictures of the shows, often while they were still in progress, Z*NET's credibility had crystallized; it had become widely accepted that, if it was reported by Z*NET, you could depend on it.

Also in 1990 and since, Ron Kovacs began several Atari and non-Atari projects under the Z*NET auspices:

* Z*NET MECHANICS ONLINE NEWSLETTER was the first, offering the proven format of the online publication to automobile mechanics, both professional and amateur. Gateway Associates, a development company formed by Bruce Kennedy, the original Z*Magazine editor and founder, has been the co-publisher/editor of the publication since the start. The MECHANICS ONLINE may be continuing or may change format and distribution in support of a commercial sales effort of completely databased auto service bulletins.

* Z*NET MACINTOSH ONLINE MAGAZINE had a trial run and is being considered for continued status.

* Z*NET PC ONLINE MAGAZINE has just been test released, and is enjoying remarkable startup success and favorable commentary, despite some very vociferous complaints from Atari users who believe that it shows Z*NET is abandoning Atari.

* Z*NET ATARI CD-ROM DISK was planned and prepared, but is currently on hold due to the unavailability of Atari CD-ROM players. If that situation reverses, the Z*NET disk will offer a terrific collection of many hundred megs of Atari software, pictures, animations, sounds, and information.

* ZMAGAZINE was revived on an aperiodic release schedule to support 8-bit Atari users.

... and there is more that we just aren't ready to discuss!

Keep in mind that the ROVAC/Z*NET effort is entirely a "hobby" on many levels... each of us involved have a "real" full time job, and do Z*stuff on our own tabs on our own time. Only a few of our enterprises actually pay for themselves. Some regular readers seem to forget that and are less than charitable when Z*NET is not available for them quite "on time", or when the Z*NET BBS is down for a while due to waiting hardware repairs or PHONE BILLS to be paid!

What will the future bring for Z*NET? No, we are NOT abandoning Atari despite new activity in other areas. Z*NET International Atari Online Magazine will continue to be published as long as there is Atari news that deserves impartial telling. The staff will change somewhat, but Ron Kovacs will remain the publisher and will retain final editorial supervision.

We DO need to solicit for more input, more contributors, and even more "permanent" staff members. So, readers, consider yourselves solicited. You can reach us to volunteer your talents (and heck, we wouldn't turn down offers of hardware or cash, either!) via EMAIL, US mail, or phone. The relevant numbers in every issue of Z*NET.

And Thanks for Reading! Your appreciation is our greatest reward.

Now let's begin our seventh year together...

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